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A VISIT TO THE CABINET
OF THE
UNITED STATES MINT,
AT
PHILADELPHIA.

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To

Charles P. Cross

With kind regards

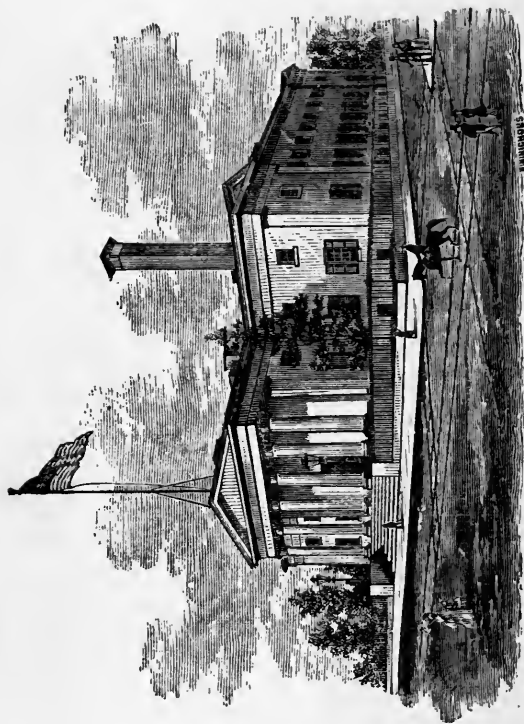
E. B. Johnston

Washington D.C.

Oct. 25th 1897.



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UNITED STATES MINT, PHILADELPHIA.

Elizabeth Bryant Johnson

A VISIT TO THE CABINET

OF THE

UNITED STATES MINT,

AT

PHILADELPHIA.

PRESS OF

J. B. LIPPINCOTT & CO.

1876.

gm

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PREFATORY.

It is not attempted in this little work to cover in detail the whole field occupied by the interesting subject of which it discourses. But it is believed that herein are embodied sufficient curious and important facts to satisfy the general reader's demand for information regarding the art—its history, uses, and elegancies—to which the following pages are devoted.

Thanks are due to the courteous officers of the Mint for the promptness, as well as patience, with which they supplied to the writer all information sought. From them, and from such other authorities as the works of ex-Director Snowden and those of Mr. W. E. Dubois, the distinguished numismatist, have most of the needed data hereof been derived.

E. B. J.

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A VISIT TO THE CABINET OF THE UNITED STATES MINT.

INTRODUCTORY.

HISTORICAL IMPORTANCE OF COIN.

It is impossible, in a cursory glance at the subject, to appreciate the importance or pleasure the numismatist realizes in his studies. That a thorough knowledge of coins and medals is a history of the world from that early date in which metals were put to such uses, will be admitted by all who have given time and labor to investigation. Coin is history epitomized. History engraven upon golden coins and medals lies hidden in tombs or buried in the bosom of mother earth, deposited there by miserly hands ages long past. All that was mortal in the sepulchre becomes dust, but neither worm nor mould can rob the golden witness of its testimony. It may have lain centuries in the sea, but salt water will not corrode it, and should nature, in convulsive throes, cast coin or medal upon dry land, the story it tells will be accepted, and possibly establish facts concerning which the learned have fought a thousand battles.

The rudeness or perfection of coins and medals furnish sure tests of the character and culture of the periods of their production. This is equally true of that rare specimen of antiquity, the Syracuse silver medal,—the oldest medal known to collectors,—and the latest triumph of the graver's art in gold, the Metis medal.

THE SYRACUSE MEDAL

was given as a reward to a victor in the Olympian games. On the obverse is the head of Ceres, often spoken of as that of a young Patrician; which is erroneous, from the fact that no mortal's head was allowed on the coins of this period. The primitive Syracusan emblem, the dolphin, is a distinguishing feature. The reverse represents a chariot race,—four horses abreast, with Fame, or Victory, hovering over the driver. While this medal is interesting as a relic, it is marvelous as a work of art. The archæologist eagerly scans numismatic treasures as the landmarks of history,—a kind of legal tender of truth,—which all are compelled to accept. Whatever has been written upon vellum or found upon papyrus has a corroborative witness in a coin or medal. Many facts are testified to only by these undying witnesses, and many lost links are supplied. Gibbon says, “If there was no other record of Hadrian, his career would be found written upon the coins of his reign.”

COINS AND MEDALS

also mark the introduction of laws; for example, an old Porcian coin gives the date of the “law of appeal,” under which, two centuries and a half later, Paul appealed to Cæsar. Another relic dates the introduction of the ballot-box; and a fact interesting to the agriculturist is established by an old silver coin of Ptolemy, upon which a man is represented cutting millet, a variety of Indian corn, with a scythe. Religions have been promulgated by coins. Islamism says upon a gold coin, “No deity but God. He has no partners. Mohammed is God’s friend, God’s apostle; God’s apostle sent with command, and religion of truth to exalt it over all religions in spite of their upholders. In the name of God, the compassionate, the merciful, this denarius was struck.”

Persian coins in mystic characters symbolize the dreadful sacrifices of the Fire-Worshippers. Again, Henry VIII., with characteristic egotism, upon a medal struck for Henry by Henry, announces in Hebrew, Greek, and Latin : "Henry, Eighth King of England, France, and Ireland ; Defender of the Faith, and in the land of England and Ireland, under Christ, the Supreme Head of the Church."

We cannot quite look upon coins and medals as fashion-plates ; yet the costumes of all ages are stamped upon them, from the golden net confining the soft tresses of the "sorceress of the Nile," and the gemmed robe of Queen Irene, to the brodered stomacher of Queen Anne, and the stately ruff of Elizabeth of England.

In this connection may be mentioned the "bonnet piece" of Scotland, a coin of the reign of James VI., which is extremely rare, one of them having recently sold for £41. The coin received its name from a representation of the king upon it, with a curiously plaited hat or bonnet which this monarch wore, a fashion that gave occasion for the ballad, "Blue Bonnets over the Border."

HERALDIC EMBLEMS

are faithfully preserved through this medium ; in truth, medallic honors may be claimed as the very foundation of heraldic art. We discover medals perpetuating revolutions, sieges, plots, and murders not a few. We prefer directing attention to the fact that coins and medals are not only the pillars of history, but a favorite vehicle of poetry—of the poetry of all nations. Epics are thus preserved by the graver's art in space inconceivably small. Poets turn with confidence to old coins for symbol as well as fact. All mythological and allegorical beauty have in coins and medals found sure retreat, and poetry a home protected from the tooth of Time or the changes of the ages.

One of the most graceful historical allusions is conveyed in the great seal of Queen Anne, after the union of Scotland with England. A rose and a thistle are growing on one stem, while, from above, the crown of England sheds effulgence upon the tender young plant.

THE GRACES OF HISTORY

are not alone recorded, and as an example of a very different nature may be cited the medals commemorating the destruction of Jerusalem, and the whole series marking that episode, especially those classed "*Judæa capta.*" They tell sadly of a people's humiliation: the tied or chained captive; the mocking goddess of victory, all made more real by reason of the introduction, on the reverse of each piece, of a Jewess weeping bitterly, and though she sits under a palm-tree, not a willow, the national lament of another captivity is forcibly recalled:

"By the rivers of Babylon, there we sat down, yea, we wept, when we remembered Zion.

"We hanged our harps upon the willows in the midst thereof."

An interesting specimen of the series above mentioned was recently found in the south of France called, "*Judæa Navillas,*" valuable particularly because it strengthens a historian's (Josephus) assertion which had provoked some comment, viz.: the fact of the escape of a large number of Jews from the Romans, by means of ships, at Joppa.

HUMOR IN MEDALS.

While it is sad to see these faithful illustrations of the sorrows of the past, a few pieces are found which would provoke a smile from the most demure and reverential antiquarian. The medal of George I., on the reverse, boastfully presents "*the horse of Brunswick*" flying over the northwest of Europe, symbolizing the Hanoverian suc-

cession. Recalling all the stories of horseflesh ever told, from Bucephalus to that wonderful charger described by Winthrop, we are sure no horse, save Pegasus, can have leaped the continent. The overthrow of the "Invincible Armada" was the occasion of a Dutch medal, showing the Hollanders richer in faith than in art culture, for the obverse of this medal presents the church upon a rock in mid-ocean, while the reverse suggests the thought that the luckless Spanish mariner was driving against the walls of the actual building.

LANGUAGE.

The effect of coin on language is direct, and many words may be found whose origin was a coin, such as Daric, a pure gold coin ; Talent, mental ability ; Sterling, genuine, pure ; while Guinea represents the aristocratic element, and, though out of circulation long ago, "no one who pretends to gentility in England would think of subscribing to any charity or fashionable object by contributing the vulgar *pound*. An extra shilling added to the *pound* makes the *guinea*, and lifts the name of the subscriber at once into the aristocratic world." In this connection we may recall the sentiment of Burns :

"The rank is but the guinea's stamp,
The man's the gowd for a' that."

ARCHITECTURE.

Architecture is largely indebted to coins, medals, and seals for accuracy and data. We learn from the medal of Septimius Severus the faultless beauty of the triumphal arch erected to celebrate his victory over Arabs and Parthians. This medal was produced two centuries before the Christian era, and is a marvel of art, for its perspective is wrought in bas-relief,—an achievement which was not again attained before the execution of the celebrated

Bronze Gates by Ghiberti, for the Baptistery at Florence, A.D. 1425. This exhumed arch was excavated long after its form and structure were familiar to men of letters through the medals. It is not generally known that the rarest portraits of famous heroes are

FOUND UPON COINS AND MEDALS.

The historian, especially the historic artist, is indebted to this source alone for the portraits of Alexander, Ptolemy, Cleopatra, Mark Antony, Cæsar, and many other celebrities. Perhaps the valuation of a rare coin or medal may be estimated by reference to one piece in the Mint at Philadelphia. It is an Egyptian coin as large as a half-eagle, and has on the obverse the head of the wife of Ptolemy,—Arsinoë,—the only portrait of her yet discovered.

Bronze is growing in favor, and now much preferred to gold for medals. Its firm, unchanging surface accepts and retains finer lines than have yet been produced upon gold and silver, and it offers no temptation to be thrown into the crucible.

MISERS.

Collectors estimate the loss to numismatography very great by reason of the temptation the gold possesses, and they are possibly the only class of people who have any apology to offer for the miser. The habit of hoarding has been despicable in all ages, as it has existed since the memory of man. Yet the world is debtor to this despised habit for some of its most invaluable specimens of art, and important corroborative history.

THE MINT.

THE people of the United States entertain a regard for the Mint different from that in which they hold other public institutions. Its age, and the peculiarly distinctive position which elevates it in a measure above political changes, invest it with a certain dignity which unhappily does not attach to other Governmental institutions. Change in its directorship has at times followed party revolutions; with but little interference, however, with other officials, as men of attainments and long experience in the several professions requisite for coinage of money are rare in all countries. These officers are not only required to be highly proficient in their various specialties, but their characters, like their gold, must be "fine." The confidence placed in the officials of the *United States Mint*, from the highest to the lowest, is a pleasing fact, for near the close of the century no shadow rests upon any name identified with its history.

The need of a mint in the Colonies was keenly felt to be a serious grievance against England for years before the Revolution, and as soon as practicable after the establishment of Independence, the *United States Mint* was authorized by an Act of Congress,—April 2, 1792.

The first building erected in any part of the United States for public use, under the authority of the Federal Government, was a structure for the United States Mint. This was a plain brick edifice, on the east side of Seventh Street, above the street now called Filbert, the corner-stone of which was laid by David Rittenhouse, Director of the

Mint, on the 31st of July, 1792. This building was in use for that purpose about forty years, having been abandoned for the present location in 1833. The building now occupied by the Mint is of white marble, and, though not of imposing proportions, is in Grecian style. The corner-stone was laid July 4, 1829, by Samuel Moore, Director, and the structure was completed in 1833. Needful changes have been introduced at various times since, and it was made more secure as a depository for its treasures by having been rendered fire-proof in 1856.

In the year 1793 was issued the first coinage of the United States. This was of copper, brought from England, and the denominations were cents and half-cents. In cents the number was 112,212, and in half-cents 31,934. In 1794 silver was first coined at the Mint of the United States, the amount being \$1758 in dollars, and \$5300 in half-dollars. In this connection the following incident is related, which illustrates the times and the men: President Washington was in the habit of inviting his chief officials to dine with him once a week. Upon one of these informal occasions he said to the Director of the Mint, Henry William de Saussure, "It would give me great pleasure to see gold coin from the United States Mint before my term of office expires." This was in July; Mr. De Saussure next day called a consultation with his officers, and in October carried a hundred golden eagles to the President.

As a contrast and a wonderful evidence of the vast growth of this country, it will be well to give the figures of the official report of the Philadelphia Mint coinage for the fiscal year ending June 30, 1876:

Gold, 422,265 pieces; value, \$8,260,937.50.

Silver, 29,303,000 pieces; value, \$6,600,502.50.

Nickel, 2,906,000 pieces; value, \$140,260.

Bronze, 9,721,000 pieces; value, \$97,210.

Total, 42,362,265 pieces; value, \$15,098,910.

No attempt will be made in this limited space to describe the many rooms in the building, or the *modus operandi* of coinage. The visitor upon entering will receive courteous attention, and all questions are certain to receive an intelligent response, so that a walk through such rooms as are open to the public is not only instructive, but will be remembered by all with interest.

WEIGHING-ROOM.

There is an universal curiosity in regard to the process by which a lump of silver or gold is transformed into the dignity of a dollar or an eagle, which curiosity is only partially satisfied, as it is both impracticable and unsafe to allow visitors to enter every room where the work is being performed. In the deposit- and weighing-room the interest is divided between the weights, the weighing, and the weighed. There are few persons who have not seen gold or silver bullion, but the nicety of the scales is quite a study. The largest weight used in this room is five hundred ounces, the smallest only the hundredth part of an ounce. On the right of this room is a vault, of which there are twelve in the building. They are of solid masonry, and several of them are iron-lined, with double iron doors, and the most ingenious and burglar-defying locks. In the gold and silver melting-rooms all the gold and silver used at the Mint in the coinage of money is weighed, melted, and moulded into ingots, which are wedge-shaped bars of silver and gold, the first worth \$60 apiece, and the second \$12.50, differing, however, in size and value according to the use for which they are designed.

These ingots are carefully stamped with their value. A very wise provision in these rooms is the false floor, which is made of iron sections about a foot square, subdivided into smaller sections called "scrapers." These prevent any small particles of the precious metals from adhering

to the feet of those who are at work. The sweepings of the buildings have amounted to \$50,000 a year. The baser metals are melted in a separate room. A corridor leads to the

ROLLING-ROOM,

in which is a large engine of eighty horse-power, the motive power of the rolling machines in the room, as well as of nearly all the other machinery in the building. The ingots are run through the "rollers" at the rate of two hundred an hour for each roller. These are so adjusted as to roll the metal into strips of the exact thickness of the intended coin. The metal is then placed in the cutting-presses, where it is cut into smooth discs known as planchets, two hundred and twenty-five of which are cut in a minute. When cut they fall into a pan and are taken to the *annealing* furnace for the purpose of softening the metal, which has now become hard and brittle. From there they go to the

ADJUSTING-ROOM,

where the work requires the utmost delicacy and precision, and this is done entirely by ladies. In the

CLEANING-ROOM,

where the planchets are next sent, they are dressed with acid, then washed in water, and thoroughly dried.

The official simplicity of the regulations which obtained in the earlier years of the institution is amusing. Not only the strength of the horse was called into requisition, but the faithfulness of the dog ; for we learn from regulations in force prior to the introduction of steam into the institution, that "no person shall presume to ride the *horse* on Sunday," and that "the day-watch shall remain with the *dog* inside the building until the night-watch enters." Under the third Director, Elias Boudinot, is

found a new ordering of things, such as, "it is understood that, in future, all the workmen and laborers find themselves in diet, drink, and lodging." Previous to this, *rum* had been allowed under the head of "*fatigue rations*."

COINING-ROOM.

Finally the coining-room is reached, where our interest in the bullion we are watching becomes more tangible as it approximates a dollar. The engine here is a subject of daily admiration. To it is attached an *indicator* which, marking the revolutions, gives notice to the chief coiner if the working of the machinery has been interrupted without good cause. This fine engine was almost entirely made and put up by the workmen of the Mint in 1839, and has been constantly in use ever since. Here, also, are the

MILLING-MACHINES,

which make a raised and beaded border on the edge of the planchet, as a protection against "coin-clipping." That work is guided by ladies, and the wonderful little machines *mill* more than a thousand a minute. The coining-room contains ten coining-presses, which are seldom all in operation; the larger ones shaping double-eagles and dollars, the smaller ones other silver and minor coins. They are each capable of producing one hundred coins per minute, and ladies are employed to work them, as extreme precision is required, for the least conceivable inaccuracy ruins the surface, and the "*spoils*" must then be returned to the melting-room.

The process of stamping coin, though of so much importance, is done on both sides at once, with marvelous rapidity. The contrast between the present method of stamping money by steam, and the antique punch, or even the hand-power in use in the early part of the century, is both interesting and instructive.

The first coining-press was invented, in 1833, by Thonnelier, a Frenchman, and introduced in the U. S. Mint in 1836; though used for nearly half a century, the changes or improvements have been immaterial, to make it answer perfectly the requirements for the work of *to-day*,—which cannot be said of many inventions. Nowhere can the advancement in the nice art of coinage be more readily appreciated than in watching the rapid evolutions of the “feeders,” which take each planchet as it is presented at the lower end of a brass tube, and place it on a lower die. At the very moment this die sinks below a collar or metal enclosure, the upper die descends, and a dollar is added to the coin of the *United States*, an authorized fact, a witness to the coming ages of the *law* which called it into existence—a record of the very nation itself.*

THE COUNTING-BOARDS

are quite curious inventions, and are used only for small silver and minor coins. Twenty-five dollars of the smallest silver denomination can be counted by this “lightning calculator” in less than a minute. The board is a plain wooden surface, with parallel grooves of copper the size of the coin to be counted. It is worked by hand over a box, and the coins are counted as they fall into it. They are then taken from the box, put in bags, and removed to the office of the Coiner, where they are again weighed and counted. By him they are handed over to the Treasurer, and are ready for delivery on demand.

After this brief walk through the Mint, such as all visitors are permitted to take, the stairway and corridors

* The difference in the edges of gold and silver coin and those of copper or nickel is caused by the *collar*. That used for gold and silver is “reeded,” making a delicate fluted edge, while for the “minor coins” it is smooth, and the coins have a plain edge.

are shown leading to the Cabinet, where no student of history, no lover of art, can fail to find rare and curious tokens of almost every age and country since the very dawn of civilization; to an outline sketch of these this little pamphlet is chiefly devoted. Near the exit door of the Cabinet, in a large glass case, is a magnificent American eagle, which is worthy of the visitor's attention. It is superbly mounted, with grand breadth of wing and wondrous piercing eyes. The portrait of this "pet" can be recognized on the obverse of the first nickel cent pieces coined in 1857.

"PETER,"

the name which the noble bird recognized, was an inhabitant of the Mint six years. He would fly about the city, but no one interfered with the going or coming of the "Mint bird," and he never failed to return from his daily exercise before the time for closing the building. In an evil hour he unfortunately perched upon a large fly-wheel, and, getting caught in the machinery, received a fatal injury in his wing, and rapidly ended rather an unusual career for an eagle.*

EASTERN CORRIDOR.

Opening into the eastern corridor are the Director's room, those of the Chief Clerk, Chief Engraver, and Chief

* An old citizen of Philadelphia is authority for the following story: "On one *fourth of July* 'Peter,' making a longer flight than was his custom, sat upon the topmost bough of a large tree, corner of South and Broad Streets, attracting and amusing a large crowd by his demonstrations—of course the result of excitement from the unusual noise in the streets. Soon, however, an Irishman, who fed him in the Mint, came under the tree and called, 'Peter, coome down!' The crowd jeered, but the Irishman averring 'Sure he looves me as if he were me own son,' repeated 'Peter, coome down!' and the bird came swooping down to the shoulders of the delighted Patrick, rather to the sudden terror of the lesser element in the assemblage."

Coiner, and the Library of Historical and Scientific Works, including many valuable books upon the art of coinage. Passing out upon the gallery, we enter the Machinists' and Engravers' rooms. Here are engraved and finished the dies used in this Mint and in all the branch mints. Visitors are not ordinarily allowed access to these rooms, to the assay office, or to the cellar. In the latter are a number of immense vaults, and in the main cellar under the yard are six large boilers, which supply the steam used throughout the building. Here are also blacksmith, carpenter, and paint shops; and in the rear is the medal-striking room, where medals are struck by a screw press, worked by hand. The cellar also contains the "sweep" grinding rooms. The importance of the "sweeps" has been heretofore remarked. Near the room are the wells, which are receptacles for the water used in washing-rooms. These wells are cleaned out every few years, and the deposit is then treated in the same way as the sweepings. The little wooden building in the yard is the "cent room," where cents are exchanged for nickel.

THE CABINET.

The room in the Mint used for the Cabinet is on the second floor. It was formerly a suite of three apartments connected by folding-doors, but the doors have been removed, and it is now a pleasant saloon fifty-four feet long by sixteen wide. The eastern and western sections are of the same proportions, each with a broad window. The central section is not quite so large, and is lighted from the dome, which is supported by four columns. There is an open space immediately under the dome, to give light to the hall below, which is the main entrance to the Mint. Around this space is a railing and a circular case for coins. Though the saloon is neither pretentious nor handsome, it is well adapted to the uses to which it is devoted. The

Cabinet of Coins was instituted in 1838, by Dr. R. M. Patterson, then Director of the Mint. Anticipating such a demand, reserves had been made for many years by Adam Eckfeldt,* the Coiner, of the "master coins" of the Mint; a term used to signify first pieces from new dies, bearing a high polish and struck with extra care. These are now more commonly called "proof pieces," and by the French gracefully named "fleur de coin." With this nucleus, and a few other valuable pieces from Mr. Eckfeldt, the business was committed to the Assay Department, and especially to Mr. Dubois, who was then Assistant Assayer. Many rare coins were found in deposits that reached our shores by means of the varied and extensive stream of immigration that has flowed into the United States during the last half-century; the same advantage exists in a measure to-day. The collection grew, year by year, by making exchanges to supply deficiencies, by purchases, by adding our own coin, and by saving foreign coins from the melting-pot,—a large part in this way, at a cost of not more than their bullion value, though demanding great care, appreciation, and study. Valuable donations were also made by travelers, consuls, and missionaries. In 1839, Congress appropriated the sum of \$1000 for the purchase of "specimens of ores and coins to be reserved at the Mint." Annually since the sum of \$300 has been appropriated by the Government for this object. More has not been asked or desired, for the officers of the Mint have not sought to vie with the long-established collections of the national cabinets of the old world, or even to equal the extravagance of some private numismatists; but they have admirably succeeded in their purpose to secure such coins as would interest all, from the

* Adam Eckfeldt's portrait by Samuel Dubois hangs in the Cabinet. His long official life of near a half-century was not only faithful unto a proverb even where faithfulness was no exception, but was marked by advance and usefulness in other than his daily duties.

schoolboy to the most enthusiastic archæologist. The economic principle upon which the collection has been gathered is a lesson to all governmental departments in frugality, as well as a restraint upon the natural tendency to extravagance which has heretofore distinguished those who have a passion (it often becomes that in intensity) for old coins. There are thousands of coin collectors in the United States, and fortunes have been accumulated in this strange way. More than one authenticated instance has been known in this country where a man has lived in penury, and died from want, yet possessed of affluence in time-defaced coins.

DAVID RITTENHOUSE.

Entering the Cabinet, the portraits of the different Directors attract attention. The portrait of David Rittenhouse, the first Director, is very fine indeed, it being a copy of a painting by Charles Wilson Peale, now the property of the American Philosophical Society. The artist who reproduced it has succeeded so well that it is not readily distinguishable from the original Peale. The face is exceptionally pleasing, and well portrays the character of this eminent officer, uniting as he did rare ability to the graces of the humanitarian and the gentleness of a Christian. "His countenance," says Dr. Rush, "was striking and remarkable. It displayed a mixture of contemplation, benignity, and innocence." Mr. Rittenhouse was appointed by Washington April 14, 1792, and remained in charge of the Mint until June, 1795, when his declining health compelled him to resign.

He was long an invalid, but never gave up his habits of study, which was indeed a passion through life. "His bodily infirmity was a window, through which he often looked with pleasure toward a place of existence where he would probably acquire more knowledge in an hour than

he had acquired in his whole life by the slow operation of reason ; and where, from the greater magnitude and extent of the objects of his contemplation, his native globe would appear like his cradle, and all the events of time like the amusements of his infant years."—[Eulogy by Dr. Rush, 1813.]

Though the difficulties of organizing an institution of such paramount importance may readily be conceived, the genius of Rittenhouse seems to have been equal to the emergency, and it is doubtful if there was his rival at that date in the country in the special talent required for the position. Like Hamilton in the Treasury and Marshall in the Supreme Court, the stamp of his genius remains indelibly impressed upon the Mint. Mr. Rittenhouse descended from an old Netherland family remarkable for its enterprise, which had been in America three generations. At an early age he indicated mechanical talent of a high order in the construction of a clock, and his studies from that time were principally mathematical. His genius soon attracted attention, and he was appointed by the colonial governor a surveyor, and in that capacity determined the famous Mason and Dixon line. He received the degree of Master of Arts from the University of Pennsylvania, also from the College of William and Mary. He was a member of the Royal Society, London, and succeeded Benjamin Franklin as President of the American Philosophical Society. He was the first President of the "Democratic Society" of Philadelphia, formed in 1795. Mr. Wm. Barber, Chief Engraver of the Mint, has produced a very fine bust of Dr. Rittenhouse, a bronzed medal. Possibly, excepting Duvivier's head of Washington after Houdon, it cannot be surpassed in the Cabinet. The engraver had a very fine subject, and treated it in the highest style of art. On the obverse is "David Rittenhouse," with date of birth and death. On the reverse, inscription, "He belonged to

the whole human race.”—“Wm. Barber.” This beautiful memento is highly prized.

HENRY WILLIAM DE SAUSSURE.

The portrait of Henry William de Saussure, second Director, was painted by Samuel Dubois, from a daguerreotype taken from a family picture in the possession of his son. This Director was distinguished for his legal ability, as well as his strict integrity and modesty. He entered upon his duties with a protest, as he claimed no knowledge of the requirements of the position, having long been a practicing lawyer; but he was reassured by Alex. Hamilton, then Secretary of the Treasury, and proved himself a fine officer for the short term of his service. He was appointed by Washington July 8, 1795, but resigned in the following October. Washington not only expressed regret at losing so valuable an officer, but consulted him as to the selection of a successor. A man distinguished in war and peace was decided upon.

ELIAS BOUDINOT,

was appointed October 28, 1795, and remained in office eleven years. The usefulness of this long and well-sustained official life was plainly felt during many succeeding years. In the summer and autumn of 1797 and the two following years, and also of 1802 and 1803, the Mint was closed on account of the ravages of the yellow fever. Mr. Boudinot resigned in 1805, and devoted the remainder of his life to benevolence and literary pursuits. He died on the 24th of October, 1821, at the advanced age of eighty-two. The fine portrait of this venerable Director was presented by a relative, and is a good copy of a painting by Waldo and Jewett.

ROBERT PATTERSON, LL.D.,

fourth Director, was appointed by Jefferson, January 17,

1806. He was a native of Ireland, and a man distinguished for his acquirements and ability, who held the office of Director for an exceptionally long term of service. * He was a man of peculiarly attractive manners, and highly esteemed by his contemporaries. His portrait, which hangs in the Cabinet, is a copy of a fine original by Rembrandt Peale.

SAMUEL MOORE, M.D.,

fifth Director, was appointed by James Monroe July 15, 1824. He was a native of New Jersey, and the son of a distinguished Revolutionary officer. He was one of the first graduates of the Penn University, having graduated in 1791, and was afterwards a tutor in that institution. During his directorship the Mint was removed to the present building. His portrait was painted from life by Mr. Samuel Dubois.

ROBERT MASKELL PATTERSON, M.D.,

son of a former Director, was sixth Director of the Mint, and was appointed by Andrew Jackson, May 26, 1835. A summary of the character of Dr. Patterson might be tersely expressed in the phrase, "A worthy son of a worthy sire," but this would not be quite a sufficient tribute. His term of office was marked by an entire revolution in the coinage, and the ready acceptance of those improvements which followed so rapidly upon the introduction of steam. Dr. Patterson possessed the advantage of foreign travel, rather unusual in those days; and having become familiar with the discoveries which had been adopted in the French Mint, he inaugurated and perfected them, also introducing improvements, which are still in use, in the machinery. He was a man of commanding intellect, of high culture, and of robust health, until well advanced in years. His portrait is in the Cabinet.

DR. GEORGE N. ECKERT

was the seventh Director, appointed by Fillmore, July 1, 1851. He served nearly two years, and resigning, was followed by Thomas M. Pettit, who was appointed by Pierce, April 4, 1853. He was in office only a few weeks when he died, and was succeeded by

HON. JAMES ROSS SNOWDEN,

who was appointed by Pierce, June 3, 1853. During his official term the building was made fire-proof, the large collection of minerals was added, and nickel was first coined.

Mr. Snowden has placed the numismatic world under many obligations, by directing the publication of two valuable quarto volumes,—one of them a description of the coins in the Cabinet, under the title of “The Mint Manual of Coins of all Nations,” the other “The Medalllic Memorials of Washington,” being mainly a description of a special collection made by himself. In the preface to the former work, he gives due credit to the literary labors of Mr. George Bull, then Chief Curator, and also to the account of the antique collection, by Mr. Dubois, then out of print, and reinserted. These books are valuable as authority, and by reason of the national character of the last mentioned.

JAMES POLLOCK, A.M., LL.D.,

the tenth Director of the Mint, was appointed by Abraham Lincoln, in 1861, and was re-appointed by President Grant, 1869 to 1873. He was born in Pennsylvania in 1810, and was early left to the guardianship of a widowed mother. He graduated at Princeton College, New Jersey, in 1831, and commenced the practice of the law in 1833. He served in Congress three terms, was one of the leading representatives of the old Whig party, and, like all who were prominently identified with that conservative organization,

reveres its name and principles. Many to-day remember his election from a strong Democratic district in Pennsylvania as the occasion of great enthusiasm. Governor Pollock was a man then in advance of his times, as an interesting historical reminiscence will demonstrate. On the 23d of June, 1848, as chairman of a special committee, he made a report to the House of Representatives in favor of the construction of a railroad to the Pacific coast; and in the fall of the same year, in a public address at Lewisburg, Union County, Pennsylvania, predicted that in less than twenty-five years we should have connecting railroad lines from New York to San Francisco, and a line of steamships established from the latter point to China and Japan, a prediction fully realized.

Throughout his brilliant Congressional career, Governor Pollock was ever an appreciative advocate of the claims and possibilities of the great West. He was elected Governor of Pennsylvania in 1854; in 1860 was a peace delegate to Washington from his State to counsel with representatives from different parts of the Union as to the possibility of amicably adjusting our unhappy national troubles.

Governor Pollock was Director of the Mint during the war, and the increased demand for money in that unparalleled public emergency greatly added to his official labor and responsibility. The motto, "In God we Trust," was introduced upon our coins by Director Pollock; this was not only appropriately added at a time of great distress, but will for ever mark an era in United States coinage, and link with it the name of the man who piously pointed the nation to their only strength in peace or war. It is difficult to do justice to an official without appearing to praise overmuch, but a simple reference to Governor Pollock's career indicates a life of usefulness, ability, and stern integrity. Having been twice Director, he now holds the office of Superintendent of the United States Mint at Philadelphia.

His portrait, by Winner, hangs in the eastern section of the Cabinet.

HENRY RICHARD LINDERMAN, M.D.,

a native of Pennsylvania, was born December 26, 1825. He was the son of Dr. John Linderman, and commenced the practice of his profession with his father in 1845. His association with the United States Mint began in 1853, when he was made Chief Clerk. He was appointed eleventh Director of the Mint by Andrew Johnson, April 1, 1867, but resigned in 1869.

Dr. Linderman during the next few years was, by the Secretary of the Treasury, delegated to perform various mint and monetary missions of great importance. The United States Mint was developing into an immense bureau, and a different organization was deemed advisable. In consequence of his thorough knowledge of the workings of all the mints and assay offices belonging to the Government, Dr. Linderman became one of the chief promoters of the revision of the coinage act, placing the section mints and assay offices under and answerable to one director, whose office, as reorganized, constituted a bureau of the Treasury Department.

Under an Act of Congress approved February 12, 1873, Henry R. Linderman was appointed by the President to the charge of the Mint and all branch mints and assay offices in the United States, with the title of *Director of the Mint*; the title of *Superintendent* being substituted for those appointed to the direction of the Mints at Philadelphia, San Francisco, etc.

While the title remains the same, the responsibility is greater and the duties more onerous, until in importance and interest it is scarcely inferior to a Cabinet office.

Dr. Linderman has done much to excite the consideration of the world to our coinage, by the introduction of the

"Trade Dollar," which has in truth achieved a revolution in our oriental monetary relations. So short a time has elapsed since its issue that it can scarcely be regarded except in the light of an experiment, but the discussions which have followed its appearance will doubtless lead to an improved system of international money exchange, the effect of which, not only upon the commercial world but upon universal progress itself, it is now impossible to estimate. To-day, Dr. Linderman is an authority and a representative man upon this subject, at home and abroad, and it will be the pleasing duty of the future biographer of this gentleman to make a record of professional eminence, sustained by rare personal integrity. Director Linderman's portrait, by Johnson, has just been placed in the Cabinet.



OBVERSE.—WASHINGTON BEFORE BOSTON.



REVERSE.—WASHINGTON BEFORE BOSTON.

RELICS.

HAVING hurriedly made mention of the portraits of the Directors of the Mint, it is well to remark several other interesting matters before speaking of the coins.

The first object in the Saloon attracting the attention is a framed copy of the law of Congress establishing the Mint, with its quaint phraseology and the original signature of Thomas Jefferson:

CONGRESS OF THE UNITED STATES:

AT THE THIRD SESSION,

Begun and held at the City of Philadelphia, on Monday, the Sixth of December, One Thousand Seven Hundred and Ninety.

RESOLVED, *By the SENATE and HOUSE of REPRESENTATIVES of the United States of America, in Congress assembled,* That a Mint shall be established under such regulations as shall be directed by law.

Resolved, That the President of the United States be, and he is hereby authorized to cause to be engaged, such principal artists as shall be necessary to carry the preceding resolution into effect, and to stipulate the terms and conditions of their service, and also to cause to be procured such apparatus as shall be requisite for the same purpose.

FREDERICK AUGUSTUS MUHLENBERG,
Speaker of the House of Representatives.

JOHN ADAMS,
Vice-President of the United States and President of the Senate.

APPROVED, March the Third, 1791.

GEORGE WASHINGTON,
President of the United States.

DEPOSITED among the ROLLS in the OFFICE of the SECRETARY of STATE.

TH: JEFFERSON,
Secretary of State.

In the first section, near the western window, is the assorting machine, the invention of a Frenchman, Baron Seguiet, and which is now in use in the Mint at Paris.

The planchets for coinage are liable to be a little too heavy or too light ; it is therefore necessary, at least in the case of gold, to assort them by weighing. This machine is designed to enable one person to do the work of many. "The planchets are thrown into the hopper at the rear, and, being arranged by the action of the wheel, slide down balances. By machinery beneath they are carried one by one to the nearest platforms to be weighed. If too heavy, the tall needle of the beam leans to the right, and lifts a pallet-wire, which connects with an apparatus under the table, by which the planchet is pushed off and slides into one of the brass pans in front. If the piece be light, the needle is drawn over to the left, and touches the other pallet, which makes a passage to another brass pan. If the piece be of true weight, or near enough, the needle stands upright between the pallets, and the piece finds its way into the third brass pan."

Here are also deposited six old watches ; two of them are from the original inventor, and were made about the year 1500, being known from their clumsiness as "Nuremberg eggs." One of them is still in working order, or was within a few years. The form of one is square, and they have no minute-hands.

On the opposite wall is a fine cast of Cromwell, a duplicate of one taken shortly after his death. It was placed here by Mr. W. E. Dubois, who received it from H. W. Field, Esq., Assayer of the Royal Mint, London, who is a descendant of the great Protector. Below the cast of Cromwell is a case of gold plate, showing progressive "alloys of gold." The plates comprise gold alloyed with copper, gold alloyed with silver, gold fine. It is easy to distinguish the difference between the higher and lower alloys in the case,

but the nicety of the advancing grades is a study which will baffle all save skilled eyes.

In the eastern section are the Standard Test Scales, which are used to test the weights sent to all the mints and assay offices in the United States, and are so delicate as to discover the *twenty-thousandth* part of an ounce. These scales were manufactured by employees of the Mint, and have been in use more than a quarter of a century. The beam is hollow, and filled with Spanish cedar to guard against the effect of dampness; the bearings are edges of knife-blades, which impinge on a surface of agate plate. These scales are examined once a year by the Annual Assay Committee, which meets on the second Tuesday in February. It is said that not even an intrusive fly is allowed to remain in the glass case during the process of weighing.

CURIOSITIES AND MINERALS.

A large part of the ancient pottery and other curiosities do not belong to the Mint, but are deposited for an indefinite time by persons of taste and discrimination in such things, and are all very curious. Two small Etruscan vases, with handles; a number of Roman vases, differing in design, and for various uses; several hand-lamps of the variety known as antique lamps. Two of the latter are toy-lamps, and were used to light the little ones to bed, as they were supposed to burn as long as their tired eyes remained open. When a child died, its lamp was buried with it. There are also two "Lachrymatories," or tear-bottles, very small flasks, which were held under the eyes to catch the mourner's tears, and afterward sealed and deposited with the remains of the deceased. Other curiosities in the case are a lamp with seven burners, used for public illumination; three small Egyptian idols of green porcelain, covered with hieroglyphics; an amulet of the Gnostics, engraved with cabalistic signs, and used as a charm against fever; an

Egyptian scarabæus, finely carved in slate ; * several Peruvian drinking-vessels, found in tombs ; a sacred book of the Hindus, in Sanscrit, inscribed upon long strips of bamboo, strung together ; and a " Byzantine prayer-book," a relic of the dark ages. The most interesting objects of this curious display are three golden images from graves in the Island of Chiriqui, off Central America. They were dug up in 1858, and sent to the Mint as bullion, to be melted. They are of pure gold, but the workmanship is very crude, and they are extremely puzzling to the antiquarian. The images are in the forms of a reptile, a bird, and a man with symbols of power in his hands, not unlike those designating Jupiter. There are also, in the first section, two large cases with choice selections of mineral specimens, carefully classified and labeled. These are the well-assorted results of years of patient collecting, and are deserving of more study than can be devoted to them by casual visitors. They are chiefly from different parts of the United States, and are an "index book" to the vast mineral wealth of the nation. There is not space in this short sketch for more than a reference to these cases, but Mr. Snowden has given quite an attractive description of this section of the Cabinet.

COINS.

The ancient coins are chiefly arranged in upright cases against the walls in the doorways and the middle section of the Saloon. The modern coins are placed in nearly level cases at either end of the room and in the circular or central cases. Of antique coins the portion labeled

GREEK REPUBLIC

will be first in interest, both historic and artistic. It is conceded that to the Greeks the world owes the introduction

* Some of these have recen'ly been removed.

of the art of coinage, and though centuries numbered by tens have passed, some of the old Greek coins equal many modern productions in purity of lines, and surpass nearly all in poetic sentiment. On the first coins no earthly potentate was allowed to be pictured, no deed of heroism portrayed. The glory of the gods was considered by the pious Greeks to be the only appropriate theme for impression on the surface of bronze, silver, and gold. The coins of the republic embrace a large variety, as a thousand towns were allowed the privilege of coinage. Upon this varied issue are preserved, as upon imperishable tablets, nearly all the legends and attributes of Greek mythology. In a word, Greek coinage is the manual of Greek mythology. Upon the coins are the heads of Jupiter, Juno, Minerva, Bacchus, Apollo, and Diana, with many sacred animals, and the work is to-day the standard of artistic perfection. Of course, the collection of this ancient period cannot be extensive. In this case there are, however, more than one hundred and fifty specimens, and these present a study so attractive and so intense that it is almost impossible to imagine what classic poetry would be without it.

Nos. 4, 5, 6 are silver coins of Ægina, which have on the obverse, for a device, the tortoise, emblematic of the security of the island amid the waves, and the protection of the gods of the sea. On the reverse are the marks of the punches only, probably denoting the value of the coins. These are claimed to belong to an era seven hundred years before Christ. No. 28 is a silver coin of Athens, with a head of Minerva splendidly drawn upon the obverse, while the reverse presents a large owl, the bird sacred to the goddess of wisdom. The devices upon this coin indicate its age to be from twenty-one to twenty-three centuries. The Greek proverb of "taking owls to Athens" referred to this coin, which was necessarily of great importance to the tradespeople of that city.

Nos. 97, 98, 99, "Massilia," are interesting as belonging to a Greek colony which settled about six hundred years before Christ upon the coast of Gaul, on the spot now known as Marseilles. This little colony fled their native country and the rule of a governor placed over it by a Persian monarch. They were distinguished for their civilization, and the work upon these small coins is the most palpable witness of that fact in existence to-day. No rude people ever yet left such evidences of culture, and abundant assurance of Greek refinement upon the Gallic character is traceable to this association, and has been perceptible through the centuries. Turning to the case labeled

GREEK MONARCHIES,

the student realizes a complete revolution in sentiment—a change from peace to war. The surfaces, of gold, silver, and bronze, bristle with lance and spear, helmet and shield. Earthly heroes succeed and displace, in the annals of art, all the gods; and on one of these coins even Jove, seated and bearing an eagle, appears to be in attendance upon the heaven-defying Alexander of Macedon, while on the obverse the same mighty conqueror impersonates Hercules. The oldest coin here is supposed to date back to 550 B.C. It is well to mention the fact here that coins were never dated until the fifteenth century; and previous to that time the ages of coins can only be determined by the legends upon them, as answering to the page of corroborative history and the art era to which they belonged. To attest the truths of these data, the utmost diligence of the antiquarian has been devoted. No. 9 bears on the obverse the Macedonian horse, a favorite animal, which the then war-loving Greeks are said to have deified. At this period the haughty royal families began to chronicle in coin their line of descent. The kings of Macedon claimed Hercules for an ancestor, and in proof thereof the lion's skin was a royal

insignia. An old historian says, "The kings of Macedon, instead of the crown, the diadem, the purple, bear upon their effigy the skin of a lion. More honorable to them is this than to be decked with pearls and precious stones." Several pieces of money in this case, upon which are heads of Alexander, have rings in them, and were worn by gracious dames as ornaments. This, it may be presumed, was a great favor. The value of this series of coins is priceless, as furnishing portraits of the heroes of that period which can be received without question as accurate, for the art patronage of the kingdom was regulated by the strictest laws. Alexander was especially jealous of how the future nations should regard his physique, allowing only three artists during his reign the privilege of drawing, painting, or modeling his head.* To such royal guardianship may be attributed the perfection to which Greek art attained; and it may well be a matter of regret that the same firmness in this regard was not universal. The last coin of this series is a small bronze coin, and was issued by Perseus, the last king of Macedon.

PERSIAN.

In this case is a collection of Persian coins, very choice, and of no mean workmanship, and, of course, portraying the faith and rites of the fire-worshippers. One era is distinctly Greek in style, and marks the period of Greek supremacy. The oldest gold coin known to the collector is the golden Daric of King Darius, with the head of the king in bold relief; and all Persian coins are so called, in remembrance of this monarch. Their money was very fine, so the word *Daric* has become incorporated into numismatic terminology to designate any pure gold coin.

* Horace says that Alexander the Great ordained that no one should take his portrait on *gems* but Pyrgoteles; no one should paint him but Apelles; and no one should stamp his head on *coins* but Lysippus.—*American Bibliopolist*.

Nos. 58 to 67 inclusive, of this series, are silver coins of the Sassanian kings. Numismatists have given to the legends of these coins most profound study, hoping to penetrate farther into the mysteries of fire-worship. Some of them are creditable in workmanship, but as they fluctuate in that regard, so has history recorded the increase or diminution of culture and intelligence among the people.

EGYPT

is also represented in this case, as is proper, for that nation had no coinage until it was taught the art when conquered by Alexander. Here are some very attractive data of Egyptian history, and from these coins are obtained the only portraits of Arsinoe, Cleopatra, and others.

THE SYRIAN COINS

are also embraced in the division called "Greek monarchies," and in them are found many coins not only important in history, but of the very finest Greek art, from the third to the first century B.C. In this period the Syriac and Hebrew coins become intermingled, a fact abundantly sustained by the Jewish shekel of Simon Maccabees. The legend of this interesting relic is in the language of Samaria; on one side the budding rod of Aaron, legend, "Jerusalem the Holy;" on the other, a cup of incense or pot of manna, and the inscription, "Shekel of Israel." This shekel is well preserved, and is one of the most prized coins known. (See Case XV., marked "*Selections.*") In this collection are some coins from Bactria, considered priceless by savans. These are trophies of recent British explorations, and are judged to be of sufficient importance to call forth from an English professor an extended treatise on the "Antiquities and Coins of Afghanistan." They are exceedingly rude in workmanship, and nearly all of

baser metal, the most important being a small, square, brass coin, in the case marked "*Selections.*"

ROMAN COINS.

A feeling not removed from awe may result from a study of the coins recognized as Roman, embracing, as they do, the "Rise and Fall" of that grandest of empires, and covering a period of twenty-two centuries. The collection of Roman coins in this Cabinet numbers nearly one thousand, and an acquaintance with it is invaluable for object-teaching, as in it is the condensed history, not only of the glory of Rome,—"*the nameless city,*" "*Mistress of the world,*"—but of her customs, her policies, her faith, her conquests, her tyrannies, her wealth, her culture, in a word, her grand, triumphant self; not only this, but her divisions, her rebellions, her *downfall*, until she lies scattered and separated, as though a daring hand had dashed a handful of her representative coins to the ground. Here is the grandest, saddest page of history; food for the moralist, the philosopher, the scientist, the artist, the poet. None can enter upon this suggestive field of investigation and leave it unimpressed. It would be the work of a lifetime to decipher their record, which has given, and is now giving, hours of labor to the patient searcher after truth. Through this entire section of time—one-third of the known history of the world—Roman art, though high, never reached the exalted purity of Greek lines. In their finest coins we see no Phidias, no Myron, no Praxiteles, but they deteriorate and fluctuate visibly when in or out of contact with the influence of the Grecian mind. Here also are many data and much suggestiveness to the lover of the antique. It is impossible to more than refer to the different cases, which are arranged in chronological order, each designating an era. First are the coins of the Republic, known as

FAMILY COINS.

These comprise about one hundred and seventy-five, of which one hundred and twenty-six are in the collection. They were struck to record the heroic deeds which first introduced any notable ancestor to fame, and hence are to-day family charts of respectability for many of the patricians of Rome, albeit some of them have plebeian roots. Be that as it may, they are as much the trusted patents of aristocracy as is the "Book of the Peerage" of England. Here are found the same distinctions between patrician and plebeian which mark all countries, the patricians being always designated by a symbol of warfare, while the plebeians were indicated by the tools and instruments of common trade. The more noticeable of the coins are as follows: No. 16, Acilia; the reverse a female leaning against a pillar, with a serpent clutched in her right hand, indicating the wisdom or courage of some ancestor. No. 20, Æmilia; on the obverse of this curious coin is a figure kneeling by the side of a camel, presenting an olive branch, from which depends a fillet or ancient diadem; on the reverse, a figure guiding a triumphal chariot, a scorpion in the field. Josephus tells us of an invasion of Arabia, and that Aretus, the king of the country, purchased peace of the Romans for five hundred talents. The diadem hanging from the olive branch chronicles the entire humiliation of Aretus, and the scorpion doubtless indicates the month of the Roman triumph. No. 30, Aquillia, a small silver coin; the reverse shows a woman kneeling before a soldier. The motto below the figures (or in the *exergue* of the coin, as is the art term) is "*Sicil.*" This commemorates the suppression of a revolt of slaves in Sicily, which was achieved by Manlius Aquillia. No. 41, Calpurnia, the family of Cæsar's noble wife; reverse, a horseman riding at full speed, a head of wheat above

him ; legend, L. Piso-Trugi. The coin recalls the fact that in the year 507 B.C. there was a famine in Rome, and Calpurnius Piso was dispatched to Africa to buy corn. This seemingly small service is magnified upon a large number of coins. Nos. 95 and 96, Hostilia, a coin with a sacrifice to *Pallor* and *Pavor* (fear and trembling), offered by Tullus Hostilius in some great emergency. No. 97, Julia ; obverse, a helmeted head ; legend, Cæsar ; reverse, a warrior in a chariot drawn by two.

No. 98, Juniu ; obverse, head of Liberty ; reverse, Junius Brutus guarded by lictors, and preceded by a herald, showing that an ancestor of Junius Brutus was the first consul of Rome. Nos. 181, 182, Tituria. The reverse shows two soldiers throwing their shields upon a prostrate female, illustrating the famous story of the "Tarpeian rock." Reverse represents the Romans carrying off Sabine women—a witness in coin of the fact that the family of Tituria trace their ancestry from the Sabines. To do justice to this case is impossible, for here are coins relating to the ancestors of Antonia, Aurelia, Cornelia, Fulvia, Horatio, Lucretia, Lucilla, Sempronia, Titia Valeria, and many others familiar to the readers of history.

This era of coins terminated about the time of the birth of Christ, when the

IMPERIAL COINS

were introduced. In noticing these, little save the labels on the case can be given.

Division II.

Julius Cæsar to Trajan, inclusive. Beginning 49 B.C., and ending 117 A.D. A simple catalogue of the illustrious names on these coins would convey an idea of their importance. All the victories of Cæsar are marked by coinage ; but out of the two hundred belonging to this case

reference need only be made to No. 24, a beautiful gold coin, with the undraped head of Augustus, exquisitely severe, the interest attaching chiefly to the legend, "The Son of God," referring to the deification of Cæsar.

Division III.

embraces from Hadrian to Elagabalus, 117-222. In the reign of Hadrian much coin was issued, though it did not bear marks of the disasters and revolts that signalized the foregoing. That he was a merciful ruler is indicated by the coins, especially one—Hispania; the reverse showing the emperor raising Spain—a female figure—from the ground. His travels are also illustrated in coin.

Division IV.

From Severus Alexander to Claudius Gothicus, 222-270. These coins indicate the vicious effect of the rulers immediately preceding.

Division V.

From Aurelian to the end of the Western Empire; includes 270-475. A brilliant succession; Aurelian's busy reign, ending in assassination; the war-like Probus, the slave-emperor; Diocletian's despotism and vindictive persecution of Christians; the usurpation of Carausius; the happy reign of Constantine the Great, Julian, Theodosius, down to Julius Nepos. These are a few of the historic names and events presented in this division.

Division VI.

covers the period of the Byzantine or Eastern Empire, and a lapse of eight centuries; but the coinage is not comparable with that of other eras, nor were events of so stirring and heroic a character. A general decay, painful to contemplate, marked this long lapse of time, which began near the acceptance of Christianity, and extended through the dark ages.

“THE TEMPLE SWEEPERS.”

A small case attracts no little attention in the Cabinet, because it contains a single coin ; and the interest does not decrease when the inscription is read : “Struck in the Philadelphia Mint at least two thousand years ago.” One of the learned professors of the Philadelphia Mint, United States, under title of “The Temple Sweepers,” wrote not long since a humorous sketch of this coin, made in the city of Attalus Philadelphus, Asia Minor, and for which Wm. Penn called his city, because the ancient one was a monument of “brotherly love.” Diana was the patroness of Philadelphia.

“On one side, then, we have a head ; not a king’s nor an emperor’s ; as yet the free city had a pride and a privilege above that. It is a female head, an ideal, representing the city itself ; or rather the dwellers in it, the *Demos*. Here in this head and title, we have the radix of that Democracy of which we hear so much. Every Democrat, and equally every Republican, may learn from a coin like this that his political theory existed many centuries ago, even in Asia, with all the surroundings of despotism against it. Here my subject has a hold upon all Americans. Like the ancient republics, we disdain to plant any man’s portrait on our coins. It must be a woman’s ; and she must represent, not any particular person, nor womanhood in general, but the whole body of the people and their franchises.

“This is all we can gather from the obverse. On the other side we have a larger variety : a running female figure ; a dog also on the trot ; a legend of some length and of more significance. Let us spread them a little.

“The half-clad figure is that of the goddess known to the Greeks as Artemis, to the Latins as Diana ; and otherwise called Selene, Phœbe, Delia, or Cynthia, names

still borne by many of our girls, both in fact and in fiction.

"She was the favorite tutelar divinity of the cities of Asia Minor, as we shall see from the inscription; they loved her and she loved them. It was rather creditable to them to make so good a selection from the crowd. She was the patroness of chastity and purity, a proof that they held such virtues in regard. She was also the head of the department of hunting,—

"Hark! the goddess Diana calls out, 'To the chase!'

and let it be observed, this was not the mean chase of timid, harmless deer and rabbits, but the bold extermination of wolves, wild boars, and jackals, a mission not less benevolent than that of the Society for the Prevention of Cruelty to Animals."

The legend on the obverse of this coin explains its name: "Friend of Philadelphia's [her] Temple Sweepers."

ORIENTAL.

At the risk of giving offense to coin collectors, it may be said that Oriental coins are not as attractive as other varieties, though there are special coins among them which have no rival in historic importance. Antique coins from the East were usually without device, and, their legends being rudely inscribed in a dead language, proved frequently to be sealed fountains to the thirsting antiquarian. Therefore in cases marked "Oriental" the visitor is undetermined where to begin to study, and often decides to give it but little time.

Those having for device the sacred peacock are from Burmah; there is, however, in the division marked "Selections" a very curious coin belonging to that country, which certainly formed a part of its earliest currency. It is a common gravel-stone, encased in a circling band of brass.

SIAM.

The coins of Siam are quite individual, and the old ones very much sought. Some of them, known to European travelers as "bullet money," are lumps of gold or silver, hammered by rude implements into a doubtful roundness, and a few Siamese characters stamped irregularly upon them. The sacred elephant is found on a large proportion of their money. A Siamese coin in the Cabinet, of modern date, is quite handsome in both workmanship and design. On the obverse is the sacred elephant in ponderous proportion, which delights the eyes of the devout, and the reverse presents a group of three pagodas, finely drawn. In the case marked "Selections" is a Siamese coin of gold, comparatively modern, called "Tecal," corresponding in some respects to the "Shekel," or "Oxen," of biblical fame. The Hebrew, or rather the coins of Judea, as they are best known by that appellation, are scattered among other nations, and are now a most suggestive national type. From time to time one is met in the archæological treasures of the countries which centuries before Christ had conquered this "peculiar people."

CHINESE.

On the south side of the first section is a case of seven hundred coins of the Celestial Empire, all classed and labeled by a Chinese scholar. With but few exceptions these coins are bronzed. Dynasty succeeds dynasty; usurpation, insurrection, are all writ in bronze. The Chinese assert an uninterrupted coinage for forty-one centuries. The manuscript attesting this is in the case, and was prepared under authority. Large numbers of their coins were considered charms, sufficient to protect the owner against fever, or even the more dreaded horrors of spiritual menace. In this connection it may be said that the Chinese

had an exalted reverence for the coin-charm, and a small coin was often placed in the mouth of the dead (now, if a Chinaman dies in California, a small silver United States coin is placed on his tongue). These coins were covered with cabalistic characters, symbolic animals, birds, etc. Two worthy of notice in this regard, and said to be of the oldest issue, are Nos. 1 and 2. The first might be mistaken for an iron safe-key; the second is known as the "razor coin," its form and almost its size being that of a razor.

In another case, appropriately labeled, is the Chinese "porcelain money." They are the only people who have made porcelain a "legal tender," though it would appear that almost every part of the three kingdoms of nature has been laid under contribution. The specimen here may be mistaken for the popular Chinese sleeve-button, bought in any bazaar for a few cents. The Chinese, as did also the Africans, utilized the small sea-shells for trade. In the same case are some of the variety legalized. Ten small shells made one "cash." This is a small, round, copper-bronzed coin, with a square hole in the centre. The Chinese dames of high degree wore such strung around their throats, which will not call forth much envy when it is known that one thousand are equal to our dollar. The Japanese, however, *outcount* their neighbors, as they have a bronze coin called the "One-hundredth," of which just seven thousand make one Spanish dollar.

Shell money of pure gold, "or gold beaten into small solid shells, was made by those natives who supplied the Portuguese slave-traders with slaves," and was called by the traders "Spondylus Macutus," from which, some contend, came the *slangy* term "spondulics." Forty of those small coins, each worth about a dollar of Spanish money, made a high price for a slave.

There is also in the Cabinet a valuable collection of African ring money, such as was worn for ornaments, of

the variety the Israelites were instructed to "spoil" their Egyptian oppressors. These ornaments are very massive and pure, comprised of elaborately carved "signet-rings, armlets, anklets," etc. One article, more novel and valuable than the others, is a pipe of fine gold, bowl and handle of curious bas-relief figures, and a heavy, square-linked chain attaching a large medallion, on which is the head of a monarch boldly drawn.

To return to the Chinese, their government, like all despotisms, is very jealous of its coining prerogatives; yet it does not fail to appreciate an advantage when offered, as is evident by the, to us, following quaint mandate:

"Proclamation.

"Jui, Grand Secretary of the Wei hua tien, President of the Board of War, and Governor-General of the Two Kuang Provinces:

"Chang, Vice-President of the Board of War, and Governor of Kwang Tung:

"Wei, Superintendent of Customs for the Canton Provinces,

Issue a Proclamation for general information:

"WHEREAS, The foreign silver (coin) in daily use among the people of the Kwang Tung Provinces has long been in circulation, and is moreover admitted to be advantageous and convenient. In the 5th and 11th years of Tung Chih (1866 and 1872) the Hongkong Mint coined a new Dollar which, upon comparison with pure silver, bore a proportion of fully ninety per cent., and as the Records will prove. Proclamations were issued notifying the people that it might come into general circulation. There has lately come to Hongkong a newly-coined American Eagle Dollar, called the 'Trade Dollar,' and Sir Brooke Robertson, the British Consul, having requested that officers might be appointed to assay it, the Viceroy and Haikwan there-

upon appointed officers to melt it down and assay it, in concert with (an officer from the British Consulate), when, taking the Haikwan Tael of pure silver as the standard, an outturn was obtained of fully 89.61—or Taels 111.6 of this new Eagle Dollar are equal to 100 Haikwan Taels of pure silver. Minutes of the assay were drawn up in proof thereof.

“For the convenience of Traders and people, therefore, this coin should be allowed to be tendered in payment of duties at the rate of touch obtained at the assay, and to come into daily circulation. It becomes the duty then of the Viceroy and his colleagues to issue a Proclamation on the subject for general information.

“This Proclamation, therefore, is for the information of you merchants, traders, soldiers, and people of every district. You must know that the ‘Eagle Trade Dollar’ that has lately come to Hongkong has been jointly assayed by officers specially appointed for the purpose, and it can be taken in payment of duties, and come into general circulation. You must not look upon it with suspicion. At the same time rogues, sharpers and the like, are hereby strictly forbidden to fabricate spurious imitations of this new Eagle Dollar, with a view to their own profit.

“And should they dare to set this prohibition at defiance, and fabricate false coin, they shall, upon discovery, most assuredly be arrested and punished. Let every one obey with trembling! Let there be no disobedience!

“A Special Proclamation. Tung Chih 12th year, 9th moon—day (October, 1873)

“Translated by

“[SIGNED] WALTER C. HILLIER.”

The need of the Trade Dollar as the medium for finding a market for our superabundance of silver was apparent to Dr. Linderman, also the demand for a coin which might

serve the same purpose as the Mexican dollar, so long used by American merchants. The healthy commercial relations now increasing will be more firmly established through the introduction of this coin, which those nicest of coin collectors, the Chinese, have learned to respect. The merchants of China, by long practice, have a "sense of touch" infallible in coin. Each merchant weighs all coins which pass into his hands, and leaves upon it his trade-mark with a small punch. After these defaced coins get back from their celestial tour, they are known as "punched dollars." This country long felt the need of a trade coin, and to the Director of the Mint may be justly attributed its policy and origin. He has reason to congratulate the country upon the manner in which the Orientals have received this coin, whose chief enemy now is the silversmith, who, seeing it is good, finds a temptation in its fineness.

JAPAN.

Perhaps the peculiar adaptability of the Japanese character cannot be better illustrated than by their late monetary revolution, especially as their coinage is hedged around with laws, with penal attachments of no doubtful character. In the small morocco case marked "Japan" are a few specimens of their original coin. Of this series the large gold plate, four inches by three and a half, is known as the "Gold Oban," their most valuable coin, worth about seventy-five dollars. This coin is of perfectly smooth surface, with an elaborate black inscription of Japanese text, burnt in by a chemical process. To take the "Gold Oban" out of the kingdom is punishable with death; to remove it by mistake, subjects the offender to imprisonment for life. The other coins in this case are, in their composition, shape, and the laws which govern them, as distinctive as the Japanese are peculiar as a people. The progressive character of the Japanese is a reality

which the so-called civilized world is beginning to appreciate, of which the most conclusive evidence yet manifest not only of that, but of the inherent strength of their laws, is their recent acceptance of the United States system of coinage. They pronounced it an improvement upon their own, and though to honor and protect that had been the education of centuries, they dismissed it, and the revolution was effected without an outward struggle by the gentlemanly Orientals.

TURKEY.

Neither space, nor the interest attached to the Ottoman Empire, justifies more than a paragraph in comparison with other series. Turkish coins often bear texts from the Koran on either side, so it may be said the tenets of their religion are their circulating medium; therefore when a follower of Mahomet holds in his hand a confession of his faith, he feels the more justified in cheating the "Christian dog." The piastres in this collection are generally those now in circulation.

EGYPT.

With the character of the coins of modern Egypt, by reason of Eastern travel and all that has been written about it, the people are generally familiar, and every one who has been to Egypt, "the oldest nation in the world" (if its own tablets be accepted), brings back a handful of "piastres."

Egypt's antique coins were of Greek or Roman workmanship, of which the very finest is in the case marked "Selections," and has not its superior for interest or beauty in the world. It was the work of some Greek artist, and presents the head of Arsinoe, wife of Ptolemy. It was found in 1868, and bought by the United States Government at a high price; but as only three have been found, its market value may be named by thousands, though its metal value is not more than twenty dollars.

This hurried notice of Oriental coins may conclude with suggestive reference to the "Cufic coins," of which there are some valuable specimens. The first is the silver dirhem of Walid, the eccentric caliph of Damascus, A.D. 713. There is also in Case XV. a coin of the reign of Haroun Alraschid, which will attract every school-boy's attention, who is permitted to suppose this very coin may have been in the treasure-jars of the "Forty Thieves."

MODERN.

To the French may be conceded the credit of the greatest discoveries and the finest suggestions in modern coinage. In the division of the Cabinet marked "French" is the ascriptitious history of that nation, from the small coin issued in the reign of Louis "the Meek" to the last currency of the republic of France, spanning a period of one thousand years. This lapse of time is a kaleidoscopic view of the tragedies of that convulsive land.

In design and execution the French coins bear the impress of the national character, and also give assurance of the art patronage in which her rulers, failing in much, have never wavered, but brought all their power and cunning to bear on securing the best artists, as in the instance of Francis I. beguiling from the holy father that exquisite artist Benvenuto Cellini, or the later *enterprise* of Napoleon Bonaparte. Pages would not do justice to this memorial case, and reference will only be made to No. 83,—a medalet of the unhappy Marie Antoinette,—which is in itself very beautiful, and from its tragic association attracts general interest.

GERMANY.

The collection of Germany is complete, but so divided and subdivided by its kingdoms and principalities as to present entirely too complex a study for the limits of this

pamphlet. Every department is perfectly classed; therefore, if any coin collector wishes information in regard to the series of this country, they may be seen here in metal, like a "Byzantine Prayer-book."

One of the most interesting coins of any age, and excelling in beauty as well, is the gold medallic ducat on which are the heads of Martin Luther and Philip Melanchthon. This coin is very generally admired by visitors to the Cabinet. In Germany, Austria, Prussia, the same class of currency is presented in confusing profusion, sometimes scarcely distinguishable one from the other, unless one be versed in the minor points of national emblems.

SWITZERLAND.

The little republic of Switzerland is modestly represented in all her cantons, each, like the classic Greek town, enjoying the coining privilege. It is even amusing, bristling as this collection is with asserted and maintained independence; and, while smiling at her individuality, we yet rejoice in the spirit evinced by the diminutive little nation. There are several pieces of commemorative and artistic worth, especially the two issues of the republic of 1796.

From Switzerland a glance at modern Italy suggests the thought that this land of gifts has lost neither skill nor love of the beautiful.

RUSSIA.

Of the Russian coins several very fine ones invite closer attention than a passing notice. The double rouble, with a magnificent draped head of Peter the Great, is unexcelled for strength of outline, and valuable as a correct portrait of one of the very greatest and most self-reliant of modern rulers. Turning to another rouble, the features of Elizabeth II. are recognized. It may be assumed, with all due deference to royalty, that this portrayal is the most laughter-provoking figure ever drawn on metal. She is so absolutely

fat as to have the effect of spreading all over the coin. Another rouble presents the majestic Catherine II. in all the strength so characteristic of this great monarch.

Of the coins marked Denmark, Norway, Sweden, there can be only the copper half-daler of Sweden mentioned. This coin is four inches square, weighs about twelve ounces, and is equivalent to a United States silver half-dollar. The daler of Sweden, thaler of Germany, dollar of Spain and America, are all synonymous terms.

ENGLAND.

The only mint of Great Britain is near the Tower of London, but it is about to be removed to a more eligible location in that city, to a building far better adapted to the use. Perhaps the most complete mints in the world at this time are those, as it were, located at the corners of the earth—San Francisco, Melbourne, and Osaka. They have this eminence, because they are new, with every advantage of modern improvement.

The first coins of Great Britain were of tin, according to Cæsar's authority, who mentions the "tin money of Britain," which has lately been sustained by the discovery, in some work of excavation, of coins of that metal in antique design. These coins are, however, of little use, by reason of the obscure inscription, or rather the frequent absence of all device.

The English collection in the Cabinet begins with a coin made after the stater of Greece, presenting the head of Minerva, with Greek helmet on obverse, while the reverse gives the figure of a woman most crudely drawn. It is supposed this rude attempt at art was coined about the time of the Roman invasion. Nothing could be in more suggestive contrast, or more truly convey an idea of the advance of civilization, than the contrast presented in placing this relic by the side of the Victorian sovereign, where, on

the obverse, is the queen's head superbly cut ; on the reverse, Wyon's inimitable figure of Una and the Lion. Volumes have been written upon British coinage, but these two coins are the Alpha and the Omega, while the thousands issued between them are progressive links to civilization.

Two small coins are placed here, thought to be contemporary with the Christian era, having no device, but an attempt to portray the sun on one side. No. 2 is the skeattae of Ethelbert I., king of Saxony, and is the first Saxon coin which has yet been appropriated. It bears upon the obverse the head of the king ; on the reverse is the figure of a bird.

Next in interest is No. 6, the penny of William the Conqueror. The bust of that famous monarch is attempted ; 1068 is about the year it is supposed to have been made. During the three centuries following, the condition of England, whether she was at peace or war, is plainly indicated by her coinage. Every added province is memorialized in coin. The rose, thistle, and fleur-de-lis, all tell in strange language for flowers of bloody battles, long sieges, perils by sea and land ; at last all resistance bowing before the ever-increasing power of Great Britain.

The first coin of English issue was dated in 1553, being either the close of Edward VI.'s or the beginning of Queen Mary's reign. This is claimed by many to be the first coin dated, though old medals of the preceding century have been found with date.

In 1558, the ryal or royal of Queen Elizabeth was issued, and was worthy to bear the name of the great English queen. On the obverse the queen is grandly enthroned, while the reverse is a large rose, in centre of which are the Danish arms of Britain, and the arms of Anjou quartered. This coin and the pound sterling of Charles I. are in Case XV., "Selections."

This pound sterling is one of the famous "siege pieces"

of that unhappy king,—which were often made on the field with hammer and anvil out of the family plate brought to the closely-pressed Stuart by his faithful followers. It is to be regretted that so much valuable family plate of no mean workmanship was thus sacrificed. This “siege piece” is the largest silver coin known. The legend upon it, rudely inscribed, is, “Let God arise; let his enemies be scattered;” above are three fleurs-de-lis, with date, “1642.”

In 1684–88, during the short reign of James II., several varieties of new coins were introduced, notably, “Maundy Money,” a small coin made to be distributed by the king on “Maundy Thursday.” Beggars, on that day, received from his majesty bags containing as many maundy pieces as the king had lived years; a custom which sounds very well, but the sovereign would have to number several centuries to make it worth the poor mendicant’s exposure upon the street trying to secure royal favor.

King James II. also had issued “gun money.” This variety was made out of old cannon, after the suppression of an Irish rebellion. Though not even giving a glance towards the interesting series of Queen Anne, it is impossible to pass unnoticed the beautiful bust of George IV., by Chantrey, upon a pattern five-sovereign piece. This well-executed bust of “the handsomest man in Europe” was said to be the means of Sir Francis Chantrey being knighted. That vain monarch was as careful about how his face would appear to future generations as was Alexander of Macedon; and Chantrey well knew if he placed upon the shoulders of sixty years the head of forty years, he had given the cabalistic words which would be the “open sesame” to royal favor.

The gold sovereign of Victoria, Nos. 183–184, has, on the reverse, an evidence of coins as a deposit of law archives. The shield surrounded by a crown, and bearing the arms of Great Britain quartered; but the arms of

Hanover *are omitted*. Although Victoria was next heir to William IV., she was prevented by the Salic law from assuming the sceptre of Hanover. On this coin, it may be remembered, are very beautifully presented the rose, the thistle, and the shamrock.

Scotch pennies, or Scotch moneys of any variety, are very much prized by collectors (see, in Case XV., "Selections," "Groat of Robert Bruce, 1602"). A very rare coin is the penny of Robert II. of Scotland, said to be the only specimen in existence of that monarch's reign. In the seventeenth century the coinage of Scotland merged into that of England.

In this collection there are a number of English counterfeits, prized because they are so well executed. Some of these give evidence of having been extensively circulated, almost defying detection.

In a small, separate section are sixty-seven

ENGLISH SILVER TOKENS,

issued in England, Scotland, and Ireland. "During the long suspension of specie payments, occasioned by the wars with Napoleon, the minor currency of England was supplied, not with small paper notes, but with silver tokens, issued by banks and traders, and made redeemable in bank notes. They were of reduced weight, to keep within the premium, and to prevent hoarding. They continued to circulate until the return of better times and of regular silver coinage. There were many varieties, most of which are here. Some of them were issued by irresponsible parties, and were never redeemed. The whole series is extremely curious, as a matter of history; and important, as suggesting what might be done here, under authority of law, and with some improvements."—*Dubois*.

PORTUGAL AND SPAIN.

Returning to the fifteenth century, the coinage of Portugal and Spain held greater sway than that of other countries. Of their coins, there are many fine specimens in this museum. The "joe and half-joe" of Portugal are known of all nations, while the Spanish dollar, with its pretentious two globes under a crown, did not claim too much, and only tells the almost limitless rule of the great Philip. The coins of these nations became, through their possessions in the New World, the circulating medium of that portion of the earth. Spanish and Mexican dollars were almost synonymous, while the real and joe of South America was patterned after that of Portugal, which fact can be learned in this Cabinet. As nations decay it will be seen their coins become inevitably less trustworthy; even a glance at the cases marked "Portugal," "Spain," will give this lesson. In the Mexican collection there are issues which seem to contradict this assertion, for the "Mexican dollar" has, for generations, had a position in the monetary world of almost unchallenged credit, yet not by reason of the recognition given Mexico, but because of the United States using it so extensively; for, until the introduction of the "trade dollar," this country had no currency that would meet the demand of the Oriental market.

MEXICO.

The Mexicans use only gold and silver, and their national series is full of tragic interest, embracing, as it does, three and a half centuries of Mexican history, from Cortez to Maximilian. The "pillar dollar," "windmill dollar," "cast dollar" (the Mexicans are the only nation that cast money), and the "cob money" (a series so called by reason of its clumsiness), are all to be seen in this collection.



OBVERSE.—CENTENNIAL MEMORIAL MEDAL.



REVERSE.—CENTENNIAL MEMORIAL MEDAL.

BRAZIL.

Of Brazilian coins there are quite a series, but, as they are not very old, and from a country which has thus far most happily escaped internal and external entanglements, they present only commercial value, though of fair workmanship. One coin, a gold "half-joe," issued in 1832, with the infant head of Dom Pedro, is very beautiful. By the side of this, in every way a contrast to it, is a series of copper coins of a late issue with the head of the "child" now seated on the throne. The coins of Bolivia gratefully present the bust of Simon Bolivar. Among the West Indies are many samples of "cut money." The law permitting money to be quartered had to be repealed, because the traders of the West Indies made the wonderful mathematical discovery that *five quarters* make a whole!

Leaving both the eastern and the western world and their coins, there is a single piece, of small commercial value, which is yet a "light-house in mid-ocean." This is the one cent of the Sandwich Islands, the only venture of that kind yet made by the enterprising little kingdom. The inscription is "Kamehameha III., one hundredth, Hawaii." The name of the king being interpreted signifies "the solitary one," which is singularly well adapted to the coin. No student of human progress can with indifference realize the *existence* of this coin, this rude link between the Occident and the Orient.

COLONIAL.

When, in 1684, the charter of the Massachusetts Bay Company was revoked, and the governor recalled, one of the grievances alleged by the crown was a colonial law concerning the Mint. The currency used by the colonies was chiefly from England, Spain, and Portugal, but the supply was limited from these sources, and the mother-

country was jealous of any infringement of her prerogative of coinage. There are various specimens of the "pine-tree" money of Massachusetts in the Cabinet. Some doubt has arisen as to the species of tree intended, but it is generally accepted as the emblematic pine. This is claimed to be about the second colonial issue, a kind of semi-official coin. The first was from the Bermudas.* It is a shilling piece, stamped by one John Hall, silversmith, of the city of Boston, 1652, who made a very good speculation of the privilege. The work on this species of coins is so exceedingly simple as to present little save a planchet. On the obverse, a double ring around a pine-tree; legend, "Massachusetts in;" and on the reverse, a double ring also, containing the legend, "New England Au Dom." The old story of the weighing of John Hall's daughter on her marriage-day is recalled in seeing these coins. Her dowry was her weight in "pine-tree" shillings; and the suggestion is allowable that these specimens formed a part of the portion of the blushing bride two centuries ago.

Charles II., it appears, was easily deceived in regard to the significance of the "pine-tree shilling." Sir Thomas Temple, a friend of the colonies, adroitly presented one of these obnoxious coins to the irate monarch, explaining that the tree was the "royal oak" which had saved his majesty's life. Whereupon the king, laughing, denominated his trans-Atlantic subjects "honest dogs," and allowed the coinage to proceed.

During the reign of George I. a new species of coin was issued from the English Mint, denomination half a cent, and it is asserted upon good authority that this was the only issue ever authorized by the home government for general circulation in the colonies. It was a coin of mixed

* This issue being made at Summer Islands, gave the name of "Summer money."

metal, resembling brass. The head of the king was on the obverse; inscription, "Georgius Rex." The reverse, a large double rose under a crown; legend, "Rosa Americana." Upon a scroll, "Utile Dulci." This is the coin which caused such excitement and so much feeling in Ireland, and which Dean Swift attacked from the pulpit.

"Peltry," we learn, was one of the principal articles of currency, and was known as "pelt," or Massachusetts currency, and was extensively used in trading between Indians and whites, sometimes called "Beaver Money," "Corne, Wheate, Barley, and Rye;"* and a still more quaint currency was established, as will be found in an old Massachusetts court order, as follows: "It is likewise ordered that muskett bulletts of a full boare shall passe current for a farthing a peece, provided that noe man be compelled to take above 12d. att a tyme of them."

In Maryland, not only cattle, tobacco, and other produce was accepted as currency, but powder and shot were also included. Lord Baltimore, in 1660, sent over to Maryland the "Baltimore" shilling. In the colonial case there is a series of these exceedingly rare coins. They were a shilling, sixpence, farthing, and are all of the same design, differing only in denomination. They were coined in London, and compare favorably with any minting of that age. The bust of Lord Baltimore on the obverse is very well cut; his name, "Cecil," is the legend. On the reverse, the coat of arms of Cecil, Lord Baltimore, is given, this device has been re-adopted by the State of Maryland. The substitution of any legal tender seems to be fraught with danger, and at best is jealously scanned by the people; and there was trouble to put this coin

* Wampum Peage," American shells strung, current in Pennsylvania, 16s. a fathom or thread, should be included in this connection, though their adoption was sectional.

into circulation. The people, though demanding coin, did not yield their old currency of wheat, corn, tobacco, powder and shot, without a demonstration. The Carolinas, Virginia, and New Hampshire all followed Maryland in the introduction of a colonial coinage.

In the interval of the Revolution, known as the Confederacy, the growth of the spirit of independence in the people is plainly written on their coins, especially upon their tokens or individual coins. We notice one inscription, attributed to Franklin, "Mind your business;" and others, such as "Good copper," "Cut your way," and like characteristic expressions. The "New York Doubloon" was coined in 1787, value sixteen dollars. This coin is highly esteemed by reason of its rarity, and its market value to-day is about one thousand dollars, as only three or four are known to be in existence.

The Washington cent of 1791 (so-called) was not a coin of the United States, but was struck at a private mint in Birmingham, England (Boulton's), partly, no doubt, to bespeak the job, and partly to please Americans generally.

It has been said that Washington objected to putting his head on the coins, and it may be true; but it was also objected that no man's head should appear on the coin of a republic, which, whether good doctrine or not, is still the prevailing idea. The "cent of 1791" is of two types, one very rare and costly, with a small eagle. The other, with a large eagle, is more common, and perhaps sells for about five dollars at auction.

UNITED STATES COINS.

The first coins made by the United States Mint were copper one cent and one-half cent issues, of which there were four designs: 1st, the "chain cent;" 2d, the "wreath cent;" 3d, the "flowing hair;" and 4th, the "liberty cap," which was used for a number of years. The "chain"

device was not acceptable to the sensitive American mind, and of consequence the accidental breaking of the die was not a subject of regret, but "quite the contrary." The pattern sections of United States coins are very beautiful and varied, especially those in gold.

A description of the only coin of recent issue which is not familiar to the country is appropriate.

THE TRADE DOLLAR.

This coin bears on the obverse a female figure seated on bales of merchandise, holding in her left hand a scroll on which is the word "liberty." At her back is a sheaf of wheat; this and the bales of goods indicate the commercial character of the coin. Her right hand, extended, offers the olive branch. On a scroll beneath the figure are the words "In God we trust," and the date below, "1873." The reverse has a circling inscription, "United States of America, Trade Dollar." In the centre is an eagle, in his claws three arrows and a sprig of olive. On a label above are the words, "E Pluribus Unum." Below, "4 lb grains fine," the value. It is very beautiful both in design and execution.

PACIFIC COAST.

The semi-official coins of the Pacific coast present quite a glittering array of monetary enterprise, and signify the great wealth and daring spirit of that part of the world. The fifty-dollar octagon gold piece, issued in 1851, is a very beautiful coin. "Gold slugs" are novelties; are oblong gold pieces, and are valued at sixteen dollars. The Utah coins also attract attention. They are of gold, fine. The device is an "all-seeing eye" and two clasped hands; reverse, "a bee-hive," with inscription, "Holiness to the Lord." Some have for legend, "G. S. L. C. P. G.," which the initiated receive as "Great Salt Lake City, Pure Gold."

It is not requisite to pursue the description of United States coins, as the series is complete and can be readily studied. The changes have been very gradual. The motto, "In God we trust," introduced by Director Pollock in 1866, and the "Trade Dollar" of Director Linderman, each mark interesting epochs of our national coinage, which will grow yearly more apparent.

There is one specimen which it is well to remark, as it illustrates how a coin may become famous without the least premonition, and also is a witness of the positive law which protects and governs coinage. A law passed Congress in 1849 ordering twenty-dollar gold pieces to be issued. One piece was struck. Something intervened to delay the work, and the year closed; then, of course, the dies had to be destroyed, as no more could be lawfully issued of 1849. The coin just beside this, marked 1850, of same value, is not worth the collector's consideration, while "1849" cannot be purchased. It is marked "unique," and is really "the only one," as the Germans fondly called Jean Paul Richter.

SELECTIONS.

Having referred many times to this case, it may be as well to append the entire list of its contents, as they, almost without exception, are rare, spanning the world from remotest antiquity to the present day, beginning with the gold Daric of Darius, and ending with the twenty-mark piece of Kaiser William.

FIRST ROW.

Series of Siamese, varying from one-third of a cent to five dollars ("bullet money"): Stater or drachma of Athens, 2100 years old—reverse, sacred owl; half-obolus of Athens, very small, one and a half cent, bronze; golden Daric of Persia, oldest gold coin known, value five dollars and

fifty cents ; stater of Alexander the Great, B.C. 336 ; stater of Philip, brother of Alexander, B.C. 323 ; Jewish shekel of Simon Maccabees, B.C. 145 ; head of Janus ; Roman aes, the first of Roman libral coins ; iron coin, Róman Republic, 500 B.C.

SECOND ROW.

Coin of ancient Bactria, Asiatic colony of Greece, *square*; Eukratides and Menander, B.C. 180 ; denarius of Augustus Cæsar, Divi F., "the son of the divine Julius" ; denarius of Tiberius ; penny of New Testament, tribute money of Cæsar, value fifteen cents ; Vespasian, Roman Emperor, "Judea Devicta" ; a veiled female beside a palm-tree." This coin commemorates the destruction of Jerusalem, A.D. 70, by Titus ; maneh of Ptolemy Philadelphus, King of Egypt, B.C. 284, most rare coin, by weight value seventeen dollars and seventy cents, esteemed value five thousand dollars. Medallions : Syracuse, Arethusa, and Quadriga ; Seleucus, a general of Alexander's army, and first King of Greece ; Syrian Dynasty, Alexander Balas ; Dionysius, Syriac, B.C. 146 ; Philip of Syria, B.C. 95 ; bronze of Cleopatra, last Queen of Egypt, called "Kleopatras."

THIRD ROW.

Gold coin of Britain, prior to Roman conquest ; penny of Ethelbert, King of Kent, era of Alfred, died 866 A.D., found in Sussex, 1804 ; Carausius, Roman Emperor in Britain A.D. 287-293, recently dug up in England ; penny of William the Conqueror, A.D. 1070 ; fourpence of Robert Bruce, King of Scotland, A.D. 1306 ; half-crown of Oliver Cromwell, 1658 ; gold ryal of Elizabeth, 1600, value, nine dollars and ninety cents ; five sovereigns of George IV., the only pure gold coins,—struck as a show-piece, head by Chantrey ; silver coin of Charlemagne, A.D. 814, value seven cents ; Dirhim of Walid, Caliph of Damascus, A.D. 713, one of the earliest Mohammedan coins, Koran-texts

on both sides ; coin of Caliph Haroun Alraschid, A.D. 806 ; gold coin of Alanaser, last Caliph of Bagdad, A.D. 1222 ; coin of Sapor, one of the Magian or fire-worshiping kings of Persia, A.D. 300.

FOURTH ROW.

Swiss crown, 1414 ; German crown, 1631 ; ducat of Hamburg, 1644, value two dollars and twenty-five cents ; German crown, Maximilian, 1615 ; Bernese crown, 1793 ; five francs of Emperor Napoleon, 1810 ; twenty francs, gold, 1815 ; ducat of Nuremberg, value, two dollars and twenty-five cents ; late coin of Turkey, twenty piastres ; crown of Bavaria ; Justinian, Emperor of Constantinople, A.D. 565 ; bezant, Heraclius, A.D. 640 ; bezant, Manuel Comnenus, A.D. 1180 ; stater of Cyrenaica (now Tripoli), 200 B.C. ; head of Jupiter Ammon,—reverse, the silphion plant, which yields the “Cyrenian juice,” used by the ancients as a condiment and medicine,—finest engraving in the collection ; a specimen of the ancient currency of Burmah, a gravel-stone encased in brass.

FIFTH ROW.

New coins of Canada ; coins of Lombardy during republic of 1848 ; Australia, two ounces, 1853 ; Australia, one pound, value five dollars ; pound sterling, Charles I. ; “Siege-pence ;” dirhem, or drachm, of Mahomed V., Caliph of Spain under the Moors, A.D. 854 ; *minuta æreolo*, “Widow’s Mite,” Greek or Syrian bronze, one-eighth of a cent, smallest ancient coin, found near the temple of Jerusalem by Dr. Barclay ; “crown dollars,” crown over two hemispheres, Spain, Charles ; gold coin, Ferdinand and Isabella ; Bavarian dollar, 1833, commemorative of thirty thousand Bavarians killed in battles with Prussia—on the obverse of this a monument, simple Doric column, quite unique.

SIXTH ROW.

Chinese silver dollar, date not given ; five-franc piece struck by Commune during siege of Paris, 1871 ; coins of new French Republic, 1876 ; dollar of Cochin China ; Japanese gold piece, 1634, value, three dollars, patterned after Chinese " cash ;" Chinese gold bar, or ten-tael piece, value, two hundred and thirty-five dollars—largest gold piece in the world.

The most notable coin in this case, and perhaps the most celebrated coin in the world, is the "Widow's Mite." Its name bespeaks its commercial insignificance. Even scholars disagree as to its real or legal name and denomination ; yet thousands every year, upon entering the Cabinet of the Mint, ask first to see the "Widow's Mite." It can never be of less interest, because it teaches the greatest lesson of true charity ever uttered,—not that which gives of abundance, but that which divides the pittance.

MEDALS.

WASHINGTON MEDALLIC MEMORIALS.

THE Mint in Philadelphia contains a monument to George Washington, composed of nearly one hundred and fifty medals, medalets, and tokens, in gold, silver, and bronze. This memorial will outlast the long-delayed shaft now termed the "Nation's disgrace," should that structure, unfortunate as it is, ever be completed. In this cabinet of medals there is ample scope to study the august proportions of Washington's character, which grow more harmonious when we look at them through the vista of a hundred years. We are amazed, however, to find but one place whereon the warrior is presented. Only the man as he was in the hearts of the people, and as he was associated with the development of his country and the promotion of the arts of peace, is perpetuated.

WASHINGTON BEFORE BOSTON.

The medal which makes the exception in this collection is one of great interest, and was the first order of the kind issued by the Continental Congress. The original medal was of gold, and was intended to commemorate the "Evacuation of Boston, March 25, 1776." The obverse has a bust of Washington, after Houdon, the reverse a group of officers upon horseback looking at the embarkation of British troops. In the distance, part of the enemy's ships are passing down the bay under full sail. The inscription, "Hostibus Primo Fugatis," tells the story. This medal

was executed by Duvivier, under the direction of Dr. Franklin, while in Paris. It was formally presented to George Washington with the resolution of thanks adopted by Congress at the time the order was given. A committee of three was chosen by Congress to propose a suitable device for the medal,—Mr. John Adams, Mr. Jay, Mr. Hopkins,—which device was forwarded to Dr. Franklin.

FRENCH MEDAL FOR WASHINGTON.

Medallic offerings to Washington were not confined to this country. In 1778 a medal was struck in Paris. It was designed by Voltaire, and has the legend, “Washington réunit par un rare assemblage les talents du guerrier et les vertus du sage.” The reverse of this medal is a happy conception, a grouping of martial emblems surrounded by diverging rays.

REVOLUTIONARY MEDALS.

The earlier medals ordered by Congress were given to commemorate some special act of bravery during the Revolutionary struggle. This list is very incomplete, indeed it would seem almost invidious to distinguish among those grand, self-sacrificing men. Conspicuous in the series are the “Wayne Medal,” awarded after the storming of Stony Point, 1779; medal struck for General Greene, commemorating the battle of Eutaw Springs, 1781; medal presented by Congressional resolution to Paul Jones, October 16, 1787. One of the most significant of these medallic memorials is the one presented to Colonel John Eager Howard (to quote from the resolution of Congress), “Because rushing suddenly upon the line of the wavering enemy, he gave a brilliant specimen of mortal bravery at the battle of Cowpens, 1781.”

INDIAN MEDALS.

Another series worth special attention is that of the

various Indian medals, presented by the Government to celebrate different treaties, and to distinguish the chiefs who have kept their plighted faith. Upon them are symbols of commerce and agriculture, only such emblems as would direct the mind of the red man to the arts of peace, and a higher civilization.

General Washington presented a silver medal to Red Jacket, and the custom prevails to this day. Within a short time the fine issue known as "Grant's Indian Peace Medal" has been added to the list. This is a very beautiful medal, and commemorates a policy toward the red man of which later events have shown him unappreciative.

PRESIDENTIAL MEDALS.

The Mint has issued a medal in compliment to each President: the bust on the obverse, and some characteristic utterance, a significant event, or leading trait of character on the other; so while rejecting the head of leader or President on coins, this collection of "Presidential Medals" is sufficient to register the names of our executives upon the annals of fame. In the list presented at the Mint only two, and the two greatest, are not found—George Washington and John Adams. Medals commemorating their presidential terms would be eminently appropriate, and complete the series.

MISCELLANEOUS.

Under this head are comprised medals given for special unofficial acts of bravery, national events of importance, scientific progress, etc. Gallantry in saving life from the perils of the sea has been highly appreciated by the Government. Among these is a medal to Captain Ingraham, for rescue of Martin Koszta; one to the United States Coast Survey, for gallantry and humanity; the beautiful "Metus Medal," the "John Horn Medal," are recent presentations; "Dr. Frederick Rose, for skill and hu-



OBVERSE.—UNITED STATES DIPLOMATIC MEDAL.



REVERSE.—UNITED STATES DIPLOMATIC MEDAL.

manity ;" the "Seward-Robinson Medal," etc. These medals are not supposed to give the minutiae of the deeds of gallantry they register, yet will serve not only to distinguish the recipient, but as an incentive to the higher development of true manliness.

Among national memorials are the "Emancipation Proclamation Medal," the "Japanese Embassy Medal," the "Pacific Railway Medal," "Cyrus W. Field Atlantic Cable Medal," the "Centennial Memorial Medals," the "United States Diplomatic Medal."

FOREIGN MEDALS.

Turning a moment from a survey of our own medallic array, it will be interesting to note in the miscellaneous case some of the more distinguished foreign medals. Attached to these works of art are such names as Duvier, Dupré, Caunus, Chantrey, Webb, Wyon, Barber, Andrieu, Stathord, etc.

The most beautiful architectural medal possibly ever produced, known as the "St. Paul's Chapel Medal," will be among the first to attract attention. It was ordered by Pius IX., in 1864, to commemorate the completion of this beautiful church. It presents the interior of the chapel with amazing fidelity, and, like all works of high art, the longer it is studied the more beauty it develops. Its deep alcoves and high altars, its frescoes and carvings, rival each other, and produce a wonderful result. The bronzing in this medal is rare, and said only to be attained by the Pope's artist. A fine English medal, celebrating the suppression of the Indian insurrection, on which is presented an armed Britannia and Lion, by Wyon, with date "1857-1858." This, though fine, does not rival his inimitable figure of "Una and the Lion," on the Victorian sovereign. Una, the chosen spirit of Britain since the Spenserian age, is a form replete with grace and

beauty, her face rendered even finer than upon that gold coin of Victoria, on the reverse of which is Una leading the British lion. Indeed, in studying her representation upon the medal, Spenser's own description of his ideal is recalled :

" Her angel's face,
As the great eye of Heaven, shyned bright,
And made a sunshine in the shady place."

"The Bust of Maria Theresa," by Andrieu. The medallion of Josephine and Napoleon, by the same, and "The Taking of the Bastile." "Moliere," by Caunus. The "Isotta Ariminensis," a very curious old medal, will attract connoisseurs; Obverse, bust of an Indian princess, hair coiffured in a remarkable manner, the lines of which describe a right angle from the back of the head; reverse, the sacred elephant, and in exergue, 1446. This medal is rare and fine.

There are other foreign medals quite worthy of study, and which will attract the attention of the visitor. This notice will close with a short sketch of

"THE HOLY ALLIANCE, OR WATERLOO MEDAL."

Not only does this large medal command attention because of the beauty of its composition, but also from a little anecdote in connection with its production.

Its name signifies that its intention was to commemorate the termination of the peninsular war of the allied powers against Napoleon I. The obverse contains in the centre profile portraits of the four allied sovereigns—George VI. of England, Nicholas I. of Russia, Francis I. of Austria, William II. of Germany. These portraits are surrounded by mythological emblems of war and its terrors. The labors of Hercules on one part, and the Fates and Furies intermingled, weaving and rending the threads of life. It is impossible to give more than a general suggestion of this

side. The reverse expresses the greatness and difficulty of a thirty-years' war, and the extent of power required to effect its termination, by the presentation of a subject known to every classic reader, namely, that of Jupiter overthrowing the Titans. No words can describe the strength and grace of this drawing, and had it been found in a frieze of some old temple it would have been the coveted possession of royalty.

This medal is not a medal in the strict sense of the word. A medal is a piece of metal—gold, silver, copper, or any malleable metal—struck between two dies, held in position by a steel collar, which dies impress the obverse and reverse at the same time.

This design was so highly prized by the English Government that it has never consented to have the dies hardened (in which process they might be broken) so as to have a medal struck, but plates have been made from impressions taken from either side, and joined together.

The anecdote referred to is illustrative of the vanity of George IV., and the honesty of the great artist Pesthucci. The artist fell under royal disfavor because he refused to accept a head of George IV., by Sir Francis Chantrey, for a work which he was engaged on, a royal commission, alleging his own model to be truer. The artist was retired upon a pension, and given "The Holy Alliance" medal to execute. It was more than twenty years before this wonder of drawing and poetic design was presented to the world.

PACIFIC RAILWAY MEDAL.

Of the medals commemorating American enterprise, none can be found, either in beauty of design or magnitude of the achievement, more interesting than the Pacific Railway medal. This medal was struck while Governor Pollock was Director, and commemorates the success of an enterprise which that officer had anticipated years before.

The design is by William Barber, Esq., Engraver of the Mint, and does credit to this member of a family distinguished for generations as engravers. The obverse is a miniature presentation of that part of the continent over which the road passes from "blue to blue," cañons, mountains, and rivers, through which the pioneer engine is dashing to its objective point. A scroll over this expanse bears the words, "Every mountain shall be made low." Underneath is the inscription, "Medal series of the United States Mint, James Pollock, Director." On the reverse is an elegant portrait in profile of the President, over whose head in a three-quarter circle are the words,

" Presidency of U. S. Grant."

Below the bust is the inscription,

" The Oceans United by Railway,"

" May 10, 1869."

The series comprising the "Centennial Memorial Medals" are too familiar to need description here. These medals, authorized by an Act of Congress, are made at the Mint, and issued by the Centennial Board of Finance, to be sold upon the Centennial grounds.

Another series of medals are those made by Mr. George B. Soley. They are Centennial in design, and comprise three distinct medals. The first is the Catholic Fountain medal. "T. A. B. Fountain" on the obverse, and the official badge of the order on the reverse.

2d. Is "Old Independence Hall" on the obverse, head of Washington on the reverse.

3d. The obverse portrays the struggles of our forefathers in 1776, and the reverse the advance made in one hundred years. This series is entirely the work of machinery, and as samples of mechanism or mechanical engraving the medals are quite interesting.

“THE UNITED STATES DIPLOMATIC MEDAL.”

This is the most interesting medal in the possession of our country. It is the medal commemorative of American independence, July 4, 1776. It was ordered by President Washington in 1791, and designed by Thomas Jefferson when Secretary of State. It is not only valuable because it was the graceful intention of these two distinguished men to have it a “Diplomatic medal” to be presented to foreign ministers upon leaving our shores, but it has a “strange eventful history” not often met with even by a medal a century old.

The letters of Jefferson certify that such an order was given to Dupres, then one of the first engravers of France. The description of Mr. Jefferson’s design (adopted with but slight change), the cost, and the need of such a diplomatic present, are fully given in a letter from the Secretary to Mr. William Short, then at Paris. It was intended to attach a chain thereto like the old Roman medallions, and the cost was to vary according to the esteem in which the recipient was held. There is also assurance afforded in these letters of Jefferson that two medals were struck, one for Marquis de la Luzerne, and the other for Count de Moustier, who succeeded Luzerne as minister to this country. That for the marquis was much the handsomer, the cost being chiefly regulated by the chain, which for this was ordered to be heavy and composed of three hundred and sixty-five links. This eminent diplomat was endeared to the people of America by the practical humanity he displayed toward our suffering troops around Philadelphia, a matter that required the greatest delicacy of the accomplished minister, so as not to offend the Court of St. James. This medal was the first diplomatic present offered by the United States Government, which gracious duty was well

performed by Thomas Jefferson, as the following extract from his letter will manifest :

“TO MARQUIS DE LA LUZERNE :

“You will receive, sir, by order of the President of the United States, as soon as they can be prepared, a medal and chain of gold, of which he desires your acceptance in token of their esteem, and of the sensibility with which they will ever recall your legation to their memory.”

The chain for the medal given Count de Moustier was composed of thirteen long links. Many inquiries have been made for these medals, but as yet their existence is not known, and it is feared they may in the vicissitudes of revolutionary France have found their fate in a crucible. A gold medal was also ordered by the Secretary of State to be struck, but without chain, and at the same time Dupres was instructed “to send this medal with the dies to Philadelphia by the first safe hand who shall be passing.” The medal and dies never reached this country, and their loss, within the last few months, has not been satisfactorily accounted for. Indeed, notwithstanding the incontestible documentary evidence, many doubted that such a medal had ever been struck.

In 1837, Mr. J. Francis Fisher gave a description of it to the Massachusetts Historical Society, and said both dies, taken separately, were in his possession, and also in the possession of a professor at Cambridge. Strange to say, no application was then made to secure them.

Dr. Linderman, October, 1874, inserted a card of inquiry in the *American Journal of Numismatics*, with the hope of securing an answer from some one of the readers of that journal. In reply, the editors gave an extract from the Director of the Mint of France, under date of July 9, 1874: “I have the honor to receive your letter of

the 13th of June last, relative to the 'medal commemorative of American Independence, July 4, 1776,' and regret to inform you that notwithstanding the most careful search I have been unable to discover anything of it. It is not to be found in the collection of coins at the museum of the Mint, neither is it mentioned in any French work in the library." This was rather discouraging, but a correspondence opened between the Director of the United States Mint and Professor Jules Marceau, of Cambridge, resulted in securing for Government the original lead impression of the medal, and the story of its long-hidden existence.

Professor Marceau writes: "In 1866, after discovering the existence of the first Fourth of July medal, I asked my friend Pelouze, then Director of the Mint in Paris, to institute researches about it. He found nothing, not only among the dies, but also among the papers and collections of coins and medals. The Vattermère collection at the National Library does not possess it, and I have no doubt of its great rarity. . . . Dupres's son told me he had a faint recollection of his father saying that one of his medals, engraved by order of Dr. Franklin for the Congress of America, never reached that country, but was destroyed by a storm or captured by an English privateer. He was unable to affirm which of the medals. Very likely it was this one. Where is the die? It is not in France. I looked for it there some years ago, and had a conversation with Dupres's son, since dead. M. Gatteau, also son of the engraver of that name, during the reign of Louis XVI., had two copies in bronze of this medal, both *fleur de coin*. He declined to part with them at any price. Since then they have been destroyed, with all his collection of pictures, sculptures, and drawings, by the Communists, in May, 1871, his hotel having been entirely burned by these modern barbarians. . . . I have the original lead proof from Dupres's son. If you think it right to have it engraved

for the Centenary I will put it at your service for that purpose."

Dr. Linderman was happy to avail himself of the professor's offer, and promptly ordered the reproduction of the medal

FOR THE CENTENNIAL.

It is a very pleasing consideration that it was a feature of the centenary of that Fourth of July which it was ordered to commemorate, and many thanks are due the Director of the Mint for the perseverance with which he has carried out the graceful project. The reproduction by C. Barber is finely executed, and the bronzing exceptionally beautiful.

The design of this medal is simple and elegant: obverse, the eagle displayed; on his breast a shield; in his right claw an olive-branch; in his left thirteen arrows; from his beak a scroll inscribed "E Pluribus Unum." Above is a sun of thirteen stars, from which issue rays passing through a circle of clouds, and extending below the wings of the eagle; legend encircling, "The United States of America;" reverse inscription, "To Peace and Commerce;" *in exergue*, IV Jul, MDCCLXXVI (July 4, 1776); to the right, Dupres F.; the figure of an Indian queen seated, personifying America; in her right hand is a cornucopia of fruit and grain; by her side are bales, a barrel, and an anchor to which she points. Mercury has just alighted, and extends to her his right hand, welcoming her into the family of nations. Beyond Mercury is the ocean, and on the extreme left is the fore part of a ship, and still farther on is land. Added, when reproduced, *in exergue*, C. Barber, 1876. It was a gracious thought on the part of our forefathers to have this medal produced as a diplomatic courtesy, and seems like unto the proud ceremonial of those days. It recalls the acts of decorum which distinguished them as men of high association and observant

of the amenities of life, public and private. They individually appear, at the distance of generations, worthy of our highest admiration ; and the best sign we perceive of better things, in this money-getting and craving age, is the development of a higher reverence for the heroes of '76.

OFFICERS
OF THE
MINT OF THE UNITED STATES
PHILADELPHIA, 1876.

Hon. JAMES POLLOCK, Superintendent.
Prof. JAS. C. BOOTH, Melter and Refiner.
N. B. BOYD, Assistant Melter and Refiner.
Col. A. L. SNOWDEN, Coiner.
O. C. BOSBYSHELL, Assistant Coiner.
WM. E. DUBOIS, Assayer.
J. B. ECKFELDT, Assistant Assayer.
WM. BARBER, Engraver.
H. C. HICKOK, Chief Clerk.
MARK H. COBB, Cashier.

LIST OF MEDALS IN COPPER BRONZED, ALSO
IN GOLD AND SILVER, WHICH MAY
BE OBTAINED AT THE MINT.

ARMY.

	Size.	Price.
1. WASHINGTON before Boston.....	42	\$2 50
2. MAJ. GENERAL GATES, for Saratoga.....	34	1 50
3. GEN. MORGAN, for Cowpens.....	35	1 50
4. JOHN EAGER HOWARD, for Cowpens.....	28	1 50
5. COL. WM. WASHINGTON, for Cowpens.....	28	1 50
6. COL. GEO. CROGHAN, for Sandusky.....	40	1 50
7. MAJ. GEN. HARRISON, for the Thames.....	40	1 50
8. GOV. ISAAC SHELBY, for the Thames.....	40	1 50
9. MAJ. GEN. SCOTT, for Chippewa and Niagara.....	40	1 50
10. MAJ. GEN. GAINES, for Fort Erie.....	40	1 50
11. MAJ. GEN. PORTER, for Chippewa, Niagara and Erie	40	1 50
12. MAJ. GEN. BROWN, for the same.....	40	1 50
13. BRIG. GEN. MILLER, for the same.....	40	1 50
14. BRIG. GEN. RIPLEY, for the same.....	40	1 50
15. MAJ. GEN. MACOMB, Battle of Plattsburg.....	40	1 50
16. MAJ. GEN. JACKSON, Battle of New Orleans.....	40	1 50
17. MAJ. GEN. TAYLOR, Palo Alto.....	40	1 50
18. " " for Monterey.....	40	1 50
19. " " for Buena Vista.....	56	3 00
20. MAJ. GEN. SCOTT, for Battles in Mexico.....	56	3 00
21. MAJ. GEN. GRANT.....	64	8 00
21a. COL. LEE, " Light-Horse Harry".....	29	1 50

NAVY.

22. JOHN PAUL JONES, for Serapis.....	36	2 00
23. CAPT. THOMAS TRUXTON, for the action with the Frigate L'Insurgente.....	35	1 50
24. CAPTAIN HULL, for Capture of the Guerriere.....	40	1 50
25. CAPT. JACOB JONES, for Capture of the Frolic.....	40	1 50
26. CAPT. DECATUR, for Capture of Macedonian.....	40	1 50
27. CAPT. BAINBRIDGE, for Capture of the Java.....	40	1 50
28. CAPT. LAWRENCE, for Capture of the Peacock.....	40	1 50
29. CAPT. BURROWS, for Capture of the Boxer.....	40	1 50

		Size.	Price.
30.	LIEUT. McCALL, for Capture of the Boxer.....	40	\$1 50
31.	CAPT. PERRY, Capture of British Fleet on Lake Erie	40	1 50
32.	CAPT. ELLIOTT, for the same.....	40	1 50
33.	CAPT. WARRINGTON, for Capture of the Epervier..	40	1 50
34.	CAPT. BLAKELY, for Capture of the Reindeer.....	40	1 50
35.	CAPT. MACDONOUGH, Capture of the British fleet on Lake Champlain.....	40	1 50
36.	CAPT. HENLEY, for the same.....	40	1 50
37.	LIEUT. CASSIN, for the same.....	40	1 50
38.	CAPT. BIDDLE, for Capture of the Penguin.....	40	1 50
39.	CAPT. STUART, Capture of the Cyane and Levant....	40	1 50
39a.	CAPT. ED. PREBLE, before Tripoli.....	40	1 50

MISCELLANEOUS.

40.	RESCUE of Officers and Crew, brig Somers.....	36	1 50
41.	CAPT. INGRAHAM, for Rescue of Martin Koszta....	64	3 00
42.	SHIPWRECK MEDAL.....	40	1 50
43.	U. S. COAST SURVEY, for Gallantry and Humanity..	21	1 00
44.	JAPANESE EMBASSY MEDAL.....	48	2 00
45.	DR. FREDERICK ROSE, for Skill and Humanity.....	48	3 00
46.	ALLEGIANCE MEDAL.....	18	25

PRESIDENTIAL.

47.	THOMAS JEFFERSON.....	47	2 50
48.	JAMES MADISON.....	40	1 50
49.	JAMES MONROE.....	40	1 50
50.	JOHN Q. ADAMS.....	40	1 50
51.	ANDREW JACKSON.....	40	1 50
52.	MARTIN VAN BUREN.....	40	1 50
53.	JOHN TYLER.....	40	1 50
54.	JAMES K. POLK.....	40	1 50
55.	ZACHARY TAYLOR.....	40	1 50
56.	MILLARD FILLMORE.,	40	1 50
57.	FRANKLIN PIERCE.....	40	1 50
58.	JAMES BUCHANAN	48	2 00
59.	ABRAHAM LINCOLN.....	48	2 00
60.	ANDREW JOHNSON.....	48	2 00
61.	ULYSSES S. GRANT.....	48	2 00

SUB-NATIONAL MEDALS.

62.	CAPT. PERRY (State of Pennsylvania), for the Capture of the British fleet on Lake Erie.....	40	1 50
63.	PENNA. VOLUNTEERS, Action on Lake Erie.....	40	1 50
64.	MAJ. GEN. SCOTT (Commonwealth of Virginia).....	56	3 00

MISCELLANEOUS AMERICAN.

	Size.	Price.
64a. PROF. AGASSIZ MEDAL.....	30	\$1 50
65. COL. ARMSTRONG, for destruction of the Indian Village of Kittaning.....	27	1 00
66. INDIAN PEACE MEDAL.....	27	1 00
67. CAPT.'S CREIGHTON, LOW, and STOUFFER, Wreck of Steamer San Francisco	47	2 00
67a. CAPT.'S CREIGHTON, LOW, and STOUFFER, Wreck of Steamer San Francisco, by Congress.....	50	3 00
67b. CORNELIUS VANDERBILT, by Congress.....	48	2 50
68. DR. HOSACK	21	25
69. FIRST STEAM COINAGE	16	25
70. COM. M. C. PERRY, from Merchants of Boston.....	40	2 00
71. PACIFIC RAILROAD MEDAL.....	29	1 25
72. EMANCIPATION PROCLAMATION MEDAL.....	29	1 00
73. CYRUS W. FIELD, Atlantic Cable.....	64	8 00
74. DR. JOSEPH PANCOAST.....	48	3 00
75. GRANT'S INDIAN PEACE MEDAL.....	40	3 00
76. "LET US HAVE PEACE".....	29	1 25
76a. SEWARD-ROBINSON.....	48	2 50

WASHINGTON MEDALS.

77. PRESIDENCY RELINQUISHED.....	25	1 00
78. THE CABINET MEDAL	37	1 00
79. TIME INCREASES HIS FAME	16	50
80. COMMENCEMENT OF CABINET.....	12	25

DIRECTORS OF THE MINT.

81. DAVID RITTENHOUSE.....	28	1 25
82. J. R. SNOWDEN.....	50	2 50
83. EX-GOV. JAS. POLLOCK.....	29	1 25

FINE GOLD MEDALS.

See Rule 3.*

TIME INCREASES HIS FAME	16	12 00
COMMENCEMENT OF CABINET.....	12	6 25
WASHINGTON AND JACKSON.....	10	4 50

* RULE 3. When a Pattern Piece is adopted and used in the regular coinage in the same year, it shall then be issued as a Proof, at a price near its current value; or, if it comes out early in the year, it will be placed in

FINE SILVER MEDALS.

See Rule 3.

	Size.	Price.
CABINET MEDAL.....	37	6 00
PRESIDENCY RELINQUISHED.....	25	3 00
ALLEGIANCE MEDAL.....	18	1 12
TIME INCREASES HIS FAME.....	16	75
COMMENCEMENT OF CABINET.....	12	35
WASHINGTON AND JACKSON.....	10	30
WASHINGTON AND LINCOLN	10	30
WASHINGTON AND GRANT.....	10	30
WASHINGTON WREATH.....	10	30
LINCOLN AND GRANT.....	10	30
LINCOLN BROKEN COLUMN.....	10	30

The diameter of the Medals is expressed by numbers, each of which indicates the sixteenth of an inch.

Medals struck to order in Gold, Silver, or Bronze, from dies of Public Institutions.

Gold Medals, payable in Gold Coin; Silver Medals, payable in Silver Coin; Bronze Medals, in U. S. Notes.

the regular Proof Set. The Superintendent will furnish, without charge, on application therefor, a Pattern Piece to any incorporated Numismatic Society in the United States. In such cases, if the pattern is in gold or silver, the value of the metal will be required.

The following tables, exhibiting the values in United States money of the pure gold or silver representing respectively the monetary units and standard coins of foreign countries, are taken from the report of the Director of the Mint for the year 1875.

Country.	Monetary unit.	Standard.	Value in U. S. money.	Standard coins.
Argentine Rep....	Peso fuerte.....	Gold.....	\$1.00	None.
Austria.....	Florin.....	Silver.....	.45, 3	Florin.
Belgium.....	Franc.....	Gold and sil.	.19, 3	5, 10, and 20 francs.
Bolivia.....	Dollar.....	Gold and sil.	.96, 5	Escudo, $\frac{1}{2}$ bolivar and bolivar.
Brazil.....	Milreis of 1000 reis...	Gold.....	.54, 5	None.
British Possess. in N. America.	Dollar.....	Gold.....	1.00	
Bogota.....	Peso.....	Gold.....	.91, 2	
Central America.	Dollar.....	Silver.....	.91, 8	Dollar.
Chili.....	Peso.....	Gold.....	.91, 2	Condor, doubloon, and Escudo.
Cuba.....	Peso.....	Gold.....	.92, 5	
Denmark.....	Crown.....	Gold.....	.26, 8	10 and 20 crowns.
Ecuador.....	Dollar.....	Silver.....	.91, 8	Dollar.
Egypt.....	Pound of 100 piasters.	Gold.....	4.97, 4	5, 10, 25, and 50 piasters.
France.....	Franc.....	Gold and sil.	.19, 3	5, 10, and 20 francs.
Great Britain....	Pound sterling.....	Gold.....	4.86, 6 $\frac{1}{2}$	$\frac{1}{2}$ sovereign and sovereign.
Greece.....	Drachma.....	Gold and sil.	.19, 3	5, 10, 20, 50, and 100 drachmas.
German Empire.	Mark.....	Gold.....	.23, 8	5, 10, and 20 marks.
Hayti.....	Dollar.....	Silver.....	.95, 2	
Japan.....	Yen.....	Gold.....	.99, 7	1, 2, 5, 10, and 20 yen.
India.....	Rupee of 16 annas...	Silver.....	.43, 6	
Italy.....	Lira.....	Gold and sil.	.19, 3	5, 10, 20, 50, and 100 lire.
Liberia.....	Dollar.....	Gold.....	1.00	
Mexico.....	Dollar.....	Silver.....	.99, 8	Peso or dollar, 5, 10, 25, and 50 centavo.
Netherlands.....	Florin.....	Silver.....	.38, 5	$\frac{1}{2}$ florin, florin, and 2 $\frac{1}{2}$ florins.
Norway.....	Crown.....	Gold.....	.26, 8	10 and 20 crowns.
Paraguay.....	Peso.....	Gold.....	1.00	
Peru.....	Dollar.....	Silver.....	.91, 8	
Porto Rico.....	Peso.....	Gold.....	.92, 5	
Portugal.....	Milreis of 1000 reis...	Gold.....	1.08, 4	2, 5, and 10 milreis.
Russia.....	Ruble of 100 copecks.	Silver.....	.73, 4	$\frac{1}{4}$, $\frac{1}{2}$, and 1 ruble.
Sandwich Isl'ds.	Dollar.....	Gold.....	1.00	
Spain.....	Peseta of 100 centimes	Gold and sil.	.19, 3	5, 10, 20, 50, and 100 pesetas.
Sweden.....	Crown.....	Gold.....	.26, 8	10 and 20 crowns.
Switzerland.....	Franc.....	Gold and sil.	.19, 3	5, 10, and 20 francs.
Tripoli.....	Mahbub of 20 piasters	Silver.....	.82, 9	
Tunis.....	Piaster of 16 caroub.	Silver.....	.11, 8	
Turkey.....	Piaster.....	Gold.....	.04, 3	25, 50, 100, 250, and 500 piasters.
U.S. of Colombia	Peso.....	Silver.....	.91, 8	
Uruguay.....	Patacon.....	Gold.....	.94, 9	

STATEMENT SHOWING THE AVERAGE WEIGHT, FINENESS,
AND VALUE OF FOREIGN COINS, AS DETERMINED BY
UNITED STATES MINT ASSAYS

EXPLANATORY REMARKS.

1. The weight is expressed in fractions of an ounce troy, agreeing with the terms used in the United States mints.

If it is desired to have the weight of any piece in grains, regard the thousandths of an ounce as integers, take their half, from which deduct four per cent. of that half, and the remainder will be grains.

2. The fineness is expressed in thousandth parts; *i.e.*, so many parts of pure gold or silver in 1000 parts of the coin. The old carat system is generally abandoned (except for jewelry), but it may be worth while to say that $41\frac{2}{3}$ thousandths equal one carat.

3. The valuation of gold is at the legal rate of 25.8 grains, 900 fine, being equal to one dollar; or \$20.672 (nearly) per ounce of fine gold.

4. The valuation of silver is at the trade-dollar rate, viz.: 420 grains, 900 fine, to the dollar.

5. These tables generally give the one principal coin of each country, from which the other sizes are easily deduced. Thus when the franc system is used, there are generally gold pieces of 40, 20, 10, and 5 francs, all in due proportion. But in silver, the fractional coins are very often of less intrinsic value than the normal coin, proportionally. These are seldom exported.

GOLD COINS.

Country.	Denomination.	Gross weight.	Fineness.	Standard weight.	Value in U. S. money.
		Ounces.	Thou'sths.	Ounces.	d. c. m.
Austria.....	Fourfold ducat.....	0.448	986	0.4908	9 13 1
Do.....	Souverain (no longer coined).....	0.363	900	0.363	6 75 4
Do.....	4 florins (new).....	0.104	900	0.104	1 93 5
Do.....	Ducat.....	0.1119	985.5	0.1225	2 27 9
Belgium.....	25 francs.....	0.254	899	0.2537	4 72 0
Brazil.....	29 milreis.....	0.575	916.5	0.5855	10 89 3
Central America.....	2 escudos.....	0.209	853.5	0.1982	3 68 7
Do.....	4 reals.....	0.027	875	0.0262	0 48 7
Chili.....	10 pesos (dollars).....	0.491	898	0.4899	9 11 4
Colombia and South America generally.....	Old doubloons*.....	0.867	870	0.8381	15 59 2
Colombia.....	20 pesos, "Bogota".....	1.033	887	1.018	18 94 0
Do.....	20 pesos, "Medellin".....	1.034	891.5	1.0242	19 05 5
Do.....	20 pesos, "Popayan".....	1.029	891.5	1.0192	18 96 2
Costa Rica.....	10 pesos.....	0.476	858.5	0.454	8 44 7
Denmark.....	20 crown.....	0.288	900	0.288	5 35 8
Do.....	Old ten-thaler.....	0.427	895	0.4246	7 89 8
Egypt.....	Bedidlik (100 piast-rs).....	0.275	875	0.2673	4 97 3
England.....	Pound, or sovereign (new)†.....	0.2568	916.5	0.2615	4 86 5
Do.....	Pound, average (worn).....	0.2563	916.5	0.2609	4 85 4
France.....	20 franc.....	0.207	899	0.2067	3 84 5
German Empire.....	New 20 marks.....	0.256	900	0.256	4 76 3
Do.....	Old ten-thaler (Prussian).....	0.427	903	0.4284	7 97 0
Greece.....	20 drachms.....	0.185	900	0.185	3 44 2
India (British).....	Mohur, or 15 rupees‡.....	0.375	916.5	0.3818	7 10 3
Italy.....	20 lire.....	0.207	899	0.2067	3 84 5
Japan.....	20 yen.....	1.072	900	1.072	19 94 2
Mexico.....	Doubloon.....	0.86735	870.25	0.8386	15 60 0
Do.....	20 pesos (empire).....	1.086	875	1.0558	19 64 2
Do.....	20 pesos (rep.ublic, new).....	1.084	873	1.0514	19 56 1
Netherlands.....	10 gilders.....	0.215	899	0.2147	3 99 3
New Granada.....	10 pesos (dollars).....	0.525	891.5	0.520	9 67 4
Norway.....	20 crowns.....	0.288	900	0.288	5 35 8
Peru.....	20 soles.....	1.0357	898.75	1.034	19 23 7
Portugal.....	Coroa (crown).....	0.308	912	0.312	5 80 5
Russia.....	5 rubles.....	0.210	916	0.2137	3 97 5
Spain.....	100 reals.....	0.268	896.5	0.2668	4 96 3
Do.....	80 reals.....	0.215	869	0.207	3 86 2
Do.....	10 escudos.....	0.27045	877	0.2695	5 01 4
Sweden.....	Ducat.....	0.111	975	0.1202	2 23 6
Do.....	Carolin (10 francs).....	0.104	900	0.104	1 93 4
Do.....	New 20 crowns (krone).....	0.288	900	0.288	5 35 8
Tunis.....	25 piasters.....	0.161	900	0.161	2 99 5
Turkey.....	100 piasters.....	0.231	915	0.2348	4 36 8

* The *doubloon* (dohlon, or more properly *onza*, though not really an ounce Spanish) is now generally discontinued, and is seldom seen here. These figures answer as well for the doubloon of Peru, Chili, Bolivia, etc., and therefore this item stands for all. Popayan pieces were rather inferior.

† The sovereigns coined at Melbourne and Sydney, in Australia, and distinguished only by the mint-marks M and S, are the same as those of the London mint. Sovereigns generally are up to the legal fineness, 916 $\frac{2}{3}$ (or 22 carats), but we report to the half in all cases.

‡ The last coinage of *mohurs* was in 1862.

SILVER COINS.

<i>Country.</i>	<i>Denomination.</i>	<i>Gross weight.</i>	<i>Fineness.</i>	<i>Standard weight.</i>	<i>Value in U. S. money.</i>
		<i>Ounces.</i>	<i>Thous'ths.</i>	<i>Ounces.</i>	<i>d. c. m.</i>
Austria.....	Old rix-dollar.....	0.902	833	0.8348	0 95 4
Do.....	Old scudo crown.....	0.836	902	0.8378	0 95 7
Do.....	Florin, before 1858.....	0.451	833	0.4174	0 47 7
Do.....	New florin.....	0.397	900	0.397	0 45 3
Do.....	New Union dollar.....	0.596	900	0.596	0 68 1
Do.....	Maria Theresa dollar, 1780.....	0.895	838	0.8334	0 95 2
Belgium.....	5 francs.....	0.803	897	0.8003	0 91 5
Do.....	2 francs.....	0.320	835	0.2968	0 33 9
Bolivia.....	New dollar.....	0.801	900	0.801	0 91 5
Brazil.....	Double milreis.....	0.8187	917.75	0.8348	0 95 4
Canada.....	20 cents.....	0.150	925	0.1541	0 17 6
Do.....	25 cents.....	0.1875	925	0.1927	0 22 0
Central America...	Dollar.....	0.866	850	0.8178	0 93 5
Chili.....	Old dollar.....	0.864	908	0.8716	0 99 6
Do.....	New dollar.....	0.801	900.5	0.8014	0 91 6
China.....	Dollar (English mint)...	0.866	901	0.8669	0 99 1
Do.....	10 cents.....	0.087	901	0.08709	0 09 9
Denmark.....	2 rigsdaler.....	0.927	877	0.90331	1 03 2
Egypt.....	Piaster (new).....	0.040	755	0.0335	0 03 8
England.....	Shilling (new).....	0.1825	924.5	0.1874	0 21 4
Do.....	Shilling (average).....	0.178	925	0.1829	0 20 9
Do.....	Florin.....	0.365	925	0.3751	0 42 9
France.....	5 franc.....	0.8018	900	0.8018	0 91 6
Do.....	2 franc.....	0.320	835	0.2968	0 33 9
N. German States.	Thaler, before 1857.....	0.712	750	0.5933	0 67 8
Do.....	Thaler (new).....	0.595	900	0.595	0 68 0
S. German States.	Florin.....	0.340	900	0.340	0 38 9
German Empire....	5 marks (new).....	0.804	900	0.804	0 91 9
Greece.....	5 drachms.....	0.719	900	0.7198	0 82 2
Hindustan.....	Rupce.....	0.374	916.5	0.380	0 43 4
Italy.....	5 lire.....	0.802	900	0.802	0 91 7
Do.....	Lira.....	0.160	835	0.1484	0 16 9
Japan.....	1 yen.....	0.8667	900	0.8667	0 99 1
Do.....	50 sen.....	0.402	800	0.3573	0 40 8
Mexico.....	Dollar.....	0.870	903	0.8729	0 99 8
Do.....	Half dollar.....	0.435	898.5	0.4343	0 49 6
Do.....	Pesto of Maximilian...	0.861	902.5	0.8633	0 98 7
Netherlands.....	2½ gilders.....	0.804	944	0.8433	0 96 4
Norway.....	Specie daler.....	0.927	877	0.9033	1 03 2
New Granada.....	Dollar of 1857.....	0.803	896	0.7994	0 91 1
Peru.....	Old dollar.....	0.866	901	0.8669	0 99 0
Do.....	Dollar of 1858.....	0.766	900	0.766	0 87 5
Do.....	Half-dollar of 1835-'38.	0.433	650	0.3127	0 35 7
Do.....	Sol.....	0.802	900	0.802	0 91 6
Portugal.....	500 reis.....	0.400	912	0.4053	0 46 3
Roumania.....	2 lei (francs), new.....	0.322	835	0.2987	0 34 1
Russia.....	Ruble.....	0.667	875	0.6484	0 74 1
Spain.....	5 pesetas (dollars).....	0.800	900	0.800	0 94 4
Do.....	Peseta (pistaren).....	0.160	835	0.1484	0 16 9
Sweden.....	Rixdaler.....	0.273	750	0.2275	0 26 0
Switzerland.....	2 francs.....	0.320	835	0.2969	0 33 9
Tunis.....	5 piasters.....	0.511	898.5	0.5101	0 58 3
Turkey.....	20 piasters.....	0.770	830	0.7101	0 81 1





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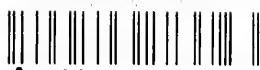
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